



THE UNIVERSITY *of* EDINBURGH

This thesis has been submitted in fulfilment of the requirements for a postgraduate degree (e.g. PhD, MPhil, DClinPsychol) at the University of Edinburgh. Please note the following terms and conditions of use:

This work is protected by copyright and other intellectual property rights, which are retained by the thesis author, unless otherwise stated.

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge.

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the author.

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the author.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given.

WALKING-WITH-SOUNDS

Creative agency, artistic collaboration and the sonic
production of acoustic city spaces.

Katerina Talianni

Ph.D. in Music

The University of Edinburgh

2018

Declaration

I hereby declare that I am the only author of this thesis. Contributions of others are indicated clearly, with reference to the literature or acknowledged otherwise. The work contained in this text has not been submitted for any other degree or professional qualification.

Katerina Talianni
Edinburgh
18th December 2018

Abstract

This thesis interrogates the urban environment through the filter of the sonic to explore the significance of sound in society. As such, it is located within studies of the auditory culture in combination with theoretical aspects of sociology, cultural studies, anthropology, philosophy, geography, and musicology that together comprise the inter-discipline of sound studies. Examples of sound art are introduced that demonstrate the development of the social interactions that take place in the networks formed by the interlacing of spatial, acoustic and informational layers, mixed realities and digital landscapes. This thesis focuses on sound art works that are coproduced by artists and audiences, exist in - real, imagined, or hybrid - space, are technologically mediated, geo-located and experienced through headphones. The audiences of this type of sound art are the listeners who explore and appropriate an area while becoming aware of the rich soundscapes of everyday life. Audiences in this sense may become participants involved in creating the content of sound art, which is in most cases field recordings and soundscape compositions. These interactions between sound art and the public space construct acoustic city spaces where sound art audiences may form acoustic communities.

I argue that sound art generates new ways to think about our cities and the ways we exist as social agents within them. For this, I explore phenomenological listening as a form of collective belonging to a place and a feeling of participating equally to our everyday sonic experience of our cities. I propose the use of an interdisciplinary research methodology that firstly triangulates ethnographic tools, and experimental auditory phenomenology, and secondly understands soundwalks and soundmaps as a method for knowing soundscapes. A research methodology for the artistic practices that use mobile audio devices can contribute to the development of a new interdisciplinary theoretical and methodological framework for researching sound art practices in public space.

The research is based on the concept of the soundscape and its multiple uses for capturing and studying the sonic environment. A case study of collaborative sound walking/mapping enables me to explore the relation between body and physical space, and in this, consider the application of playful, collaborative and creative sonic

affordances in urban design and in the right to the city. Ultimately, I present a definition of acoustic communities and acoustic space through a sound art outlook. I examine acoustic community emergence and formation and how this informs the ways these communities perceive, document, and share their experience of space. My aim is to show that the development of a sound art practice, where everyday and artistic listening practices intertwine with agency and creativity, assembles inclusive acoustic spaces where emerging artistic acoustic communities are empowered to construct agonistic acoustic city spaces.

Lay Summary

This thesis interrogates the urban environment through the filter of the sonic to explore the significance of sound in society. As such, it is located within studies of the auditory culture in combination with theoretical aspects of sociology, cultural studies, anthropology, philosophy, geography, and musicology that together comprise the inter-discipline of sound studies. Examples of sound art are introduced that demonstrate the development of the social interactions that take place in the networks formed by the interlacing of spatial, acoustic and informational layers, mixed realities and digital landscapes. This thesis focuses on sound art works that are coproduced by artists and audiences, exist in - real, imagined, or hybrid - space, are technologically mediated, geo-located and experienced through headphones. The audiences of this type of sound art are the listeners who explore and appropriate an area while becoming aware of the rich soundscapes of everyday life. Audiences in this sense may become participants involved in creating the content of sound art, which is in most cases field recordings and soundscape compositions.

Acknowledgements

First of all, I would like to express my sincere gratitude to my supervisors, Dr Annette Davison, Prof Richard Coyne, and Dr Penny Travlou. Dr Annette Davison has provided support and insight with great enthusiasm and inexhaustible encouragement. Prof Richard Coyne has offered extremely valuable suggestions, always opening up new territories for me to explore, offering new stimuli to investigate further.

A huge thanks to my family, who have supported my choices and inspired me to pursue my aspirations.

Special thanks to Akoo-o, Dana Papachristou, Giorgos Samantas, Sofia Grigoriadou, Nikos Boubaris, my distant research mates and fellow sound researchers and practitioners, for the continuous exchange of information and for providing their knowledge, support and inspiration in my research.

A special thanks to Dimitris Charitos and Pavlos Kavouras, who introduced me to the world of academic research and encouraged me to pursue my goals.

Love and gratitude to Tina, a friend with whom I shared the same office, but also ideas, dreams, frustrations, disappointments, and successes. I am especially grateful to Eleni, for her constant support and encouragement, and also to my colleagues and friends from Edinburgh College of Art, Roxana, Dara, and Jack, with whom I shared much of my time during the doctorate, supporting each other with inputs, suggestions, and reflections.

A special thanks to Miriam, Eimear, Zoe, Strato, and Akis for the support and the passionate discussions about listening, and for listening.

This work is dedicated to Aristos.

Table of Contents

Declaration.....	i
Abstract.....	ii
Lay Summary.....	iv
Acknowledgements.....	v
Table of Contents.....	vi
List of figures.....	ix
Chapter 1 Introduction.....	1
1.1 The urban auditory: Sound Studies and Auditory Culture.....	1
1.1.1 The natureculture of sound: an onto-ethico-epistemology.....	2
1.2 Sound(ing) Sound Art.....	6
1.2.1 Soundwalks.....	12
1.2.2 Soundmaps.....	16
1.3 Hypothesis and Research Questions.....	20
1.4 Thesis Outline.....	22
Chapter 2 Listening to Sound Art and Place.....	29
2.1 Introduction.....	29
2.2 Listening to the soundscape.....	30
2.2.1 Listening modes.....	32
2.2.2 Listening to sound(ing) art: subject-object relation.....	37
2.3 Place acoustemology.....	44
2.3.1 Sensing place.....	45
2.3.2 Listening perceptions of place.....	47
2.4 Knowing place through sound and walking.....	49
2.4.1 Hearing with our feet.....	51
2.4.2 Mapping the soundscape.....	56
Chapter 3 Walking-with-sound: Methodological tools for sonic urbanism.....	65
3.1 Introduction.....	65
3.2 Ethnographic methods.....	66

3.2.1 Participant observation.....	67
3.2.2 The artwork as fieldwork.....	69
3.2.3 Research interview method.....	71
3.3 Walking as method: research and artistic praxis.....	73
3.3.1 Walking interviews.....	75
3.3.2 Aesthetics and qualities of mobility: mobile methodologies	79
3.4 Phenomenologies of sound.....	83
3.4.1 Soundwalk/Soundmap: a method for understanding soundscapes	97
3.5 Experimental sound methodologies	100
3.5.1 The <i>Impossible Inaudible Soundwalk</i>	102
3.5.2 SoundTag.....	102
3.5.3 Exposing the Invisible City.....	103
3.5.4 SGSAH Thinker Residency programme	104
3.6 The third space of collaboration.....	106
Chapter 4 The <i>Impossible Inaudible Soundwalk</i>: Performing a Phenomenology in Sound.....	111
4.1 Introduction	111
4.2 The Impossible Inaudible Soundwalk workshop.....	112
4.2.1 The workshop	115
4.2.2 Sonic design of the city	126
4.3 A phenomenological reading of the <i>Impossible Inaudible Soundwalk</i>	131
4.3.1 The soundmap	133
4.3.2 Imaginative listening.....	145
4.4 Playful noises	148
4.4.1 Noise	149
4.4.2 Play	152
4.5 Creative bodies in sound.....	155
4.5.1 Double consciousness	159
4.5.2 Distributed agency.....	162
4.6 Rethinking the auditory bubble	163
Chapter 5 The Sounds of...: Mapping space in sound	173
5.1. Introduction	173

5.2. Soundmapping methodologies.....	174
5.2.1 Visual.....	175
5.2.2 Cartographic.....	176
5.2.3 Performative.....	184
5.2.4 Compositional.....	186
5.3 Soundtagging the Invisible City: two case studies of experimental cartographies ...	188
5.4 Audile techniques for experimental cartography.....	196
5.5 Soundmap critique.....	201
5.6 Sonic memory matter	207
Chapter 6 Acoustic Communities in Acoustic Spaces.....	213
6.1 Introduction.....	213
6.2 Acoustic communities.....	214
6.3 Making space in sound: thinking about space with a sonic sensibility.....	226
6.4 Making space in sound with others	232
6.5 Sound(ing) art's agonistic intervention	239
6.5.1 Agonistic sonic agency	243
Chapter 7 Conclusion	247
7.1 Listening together, critically: a thesis overview	247
7.2 Listening further: a situated sound art practice	251
7.3 Sound art's political potentiality.....	253
Appendix A Interviews and discussions.....	262
Akoo-o Interviews.....	262
Interview with Nikos Boubaris, Akoo-o, 2/1/2017, Athens.	262
Interview with Sofia Grigoriadou, Akoo-o, 30/11/2015, Edinburgh.....	274
Interview with George Samantas, Akoo-o, 8/11/2015, Ghent.	285
Interview with Dana Papachristou, Akoo-o, 9/11/2015, Ghent.....	297
Impossible Inaudible Soundwalk interviews.....	304
Participant 1, early 20s, architect, male	304
Participant 2, 50s, composer, female, 25/02/2016.....	307
Participant 3, mid 20s, sound designer, male, 22/02/2016.	311

Participant 4, director and activist, mid 30s, female The <i>Singalong</i> story, 18/02/2016	315
Group discussions.....	317
Appendix B Following the Akoo-o group	319
<i>Cracks on the soundwalk</i> , Audiowalk commissioned by the conference DARE, Belgium (2015).....	322
Betwixt sound, art and social reality	326
Bibliography	329

List of figures

FIGURE 1 - <i>EINANDER ZUHÖREN – STADT – (GE)SCHICHTEN</i>	93
FIGURE 2 - <i>UTOPIA: CITIES AND MEMORY</i>	95
FIGURE 3 - <i>WITH YOUR CONSENT</i>	96
FIGURE 4 - LISTENING WALK WITH RESIDENTS OF THE TOWN OF HUNTLY AND THE STAFF FROM DEVERON PROJECTS, 13/05/2017	105
FIGURE 5 - FRIDAY LUNCH AND POST- LISTENING WALK REFLECTION WITH RESIDENTS OF THE TOWN OF HUNTLY AND THE STAFF FROM DEVERON PROJECTS, 13/05/2017.....	106
FIGURE 6 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK POSTER THAT WAS USED TO RECRUIT PARTICIPANTS, FEBRUARY 2016	113
FIGURE 7 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK WORKSHOP PARTICIPANTS, 15/02/2016.....	118
FIGURE 8 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK WORKSHOP: PREPARING FOR THE FIELD RECORDING EXPEDITION, 16/02/2016.....	120
FIGURE 9 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK WORKSHOP: RECORDING WITH A DIY HYDROPHONE, 16/02/2016.....	121
FIGURE 10 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK WORKSHOP: RECORDING THE SOUNDSCAPE WITH A ZOOM RECORDER, 16/02/2016.....	122
FIGURE 11 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK WORKSHOP: COMPOSING TOGETHER 18/02/2016.....	123
FIGURE 12 - MAPPING THE IMPOSSIBLE INAUDIBLE SOUNDWALK, 18/02-2016.....	125
FIGURE 13 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK EXPERIENCE, 18/02/2016.....	127
FIGURE 14 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: OVERLAPPING SOUNDSCAPES	133
FIGURE 15 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: BAGPIPE_RAILTRACK SOUND COMPOSITION	134
FIGURE 16 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: BRAKES_BIRDS SOUND COMPOSITION	135
FIGURE 17 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: SINGALONG SOUND COMPOSITION	136
FIGURE 18 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: DISTURBANCES SOUND COMPOSITION	137
FIGURE 19 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: BELLS_MANHOLE SOUND COMPOSITION	138
FIGURE 20 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: SOUNDWALK_ORGAN SOUND COMPOSITION.....	139
FIGURE 21 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: DISTURBANCES SOUND COMPOSITION (LABYRINTH)...	140
FIGURE 22 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: WIND SOUND COMPOSITION.....	141
FIGURE 23 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: GALLERY SOUND COMPOSITION	141
FIGURE 24 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: ICE SOUND COMPOSITIONS.....	142
FIGURE 25 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: DRONE SOUND COMPOSITION	143
FIGURE 26 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK MAP: BOYRACER/KANGAROO SOUND COMPOSITION	144
FIGURE 27 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK ALTERNATIVE MAP, 18/02/2016	147

FIGURE 28 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK: DIWO COMPOSITION ON THE MAP, 18/02/2016	156
FIGURE 29 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK EXPERIENCE, 19/02/2016.....	163
FIGURE 30 - THE IMPOSSIBLE INAUDIBLE SOUNDWALK EXPERIENCE, 19/02/2016.....	166
FIGURE 31 - CULTURAL LANDSCAPES MASTER'S STUDENTS EXPERIENCE THE IMPOSSIBLE INAUDIBLE SOUNDWALK, 13/11/2018.....	169
FIGURE 32 - SoudTAG LAUNCH POSTER, APRIL 2016	189
FIGURE 33 - SOUNDTAG APP INTERFACE, APRIL 2016	190
FIGURE 34 - SOUNDTAG INTERACTIVE SOUNDMAP INTERFACE, APRIL 2016.....	190
FIGURE 35 - SOUNDTAG DEVELOPERS CONDUCT A LISTENING WALK/FIELD RECORDING EXPEDITION, FEBRUARY 2016	191
FIGURE 36 - SOUNDTAG INTERACTIVE SOUNDMAP AND APP LAUNCH, APRIL 2016.....	192
FIGURE 37 - THE INVISIBLE CITIES:MAPPING THE INVISIBLE PROJECT, JANUARY-APRIL 2017	193
FIGURE 38 - EXPOSING THE INVISIBLE CITY: A BRAIN-DRIVEN AUDIOVISUAL WALK THE OVERALL ROUTE	193
FIGURE 39 - EXPOSING THE INVISIBLE CITY: A BRAIN-DRIVEN AUDIOVISUAL WALK ROUTE PARTITION, DATA PARTITION, TIMECODES AND TASK DISTRIBUTION, APRIL 2017.....	194
FIGURE 40 - EXPOSING THE INVISIBLE CITY: SONIFICATIONS & VISUALISATIONS, APRIL 2017.....	195
FIGURE 41 - EXPOSING THE INVISIBLE CITY: THE MAP AND THE EMOTIONS, APRIL 2017	196

Chapter 1 | Introduction

1.1 | The urban auditory: Sound Studies and Auditory Culture

The practice of listening is the main method to engage with sound and also with this thesis. Listening brings a sonic engagement with the “multiple cultural layers that are embedded in any sound” (Bull & Back, 2016, p.1). As a creative practice it privileges both experience and action to offer “a new way of understanding the world” through not just the sonic register, “but, as importantly, through all the senses” (ibid). The interrogation of the environment through the filter of the sonic promotes greater understandings of the significance of sound in society, what is auditory culture. Auditory culture benefits from contributions from sociology, cultural studies, anthropology, philosophy, urban geography, musicology, and others, that together comprise the inter-discipline of sound studies. Sound studies is a growing field that pays attention to all sounds; contributions both within or outside the art context are theorizing how knowledge is produced through sound and listening. Sound’s restless nature creates the opportunity for relating with the other, and therefore, holds extended opportunities for solidarity and integration, creating a space of radical sharing; acoustic space is thus lived, not represented or conceived.

This thesis, in its interdisciplinary nature, benefits from all the aforementioned disciplines and their methods, and focuses on sound’s “omnipresent, nondirectional and mobile” capacity to disintegrate and reconfigure space (Connor, 1997, pp.206–207), thus yielding multifaceted transformations of urban experience through the auditory: “Where auditory experience is dominant, singular perspective gives way to plural permeated space” (ibid). To do so, it considers the senses as central to the evaluation of the relationship between agency and social structure; producing knowledge through sound and listening. The “sensory self” outlined in Connor’s “modern auditory I” (ibid) thus is historically constituted and tied to the social formation and organization of the senses. Sound has the possibility to move us toward a shared sensibility from which to build a common sense simultaneously, by way of sonic criticality. Sound can animate flows between bodies and things; it is fundamentally a vibrant matter (Bennett, 2010). The limits of bodies and things radically extend through sounded actions; and all materialities are, or can become,

lively, affective, and signaling (ibid).¹ Sound intensifies relations by animating their potentiality, exposing the matters and bodies of the world to each other.

This extension of sound studies toward the urgencies of contemporary life, is the theme of LaBelle's recent treatise on sonic agency (2018). There, he considers and reflects upon what sound does, how it behaves and performs, what it evokes, and the ways in which subjectivity and social formations are supported and enlivened by the listening sense. He explores forms of cultural production, social acts, and subject positions that may be supported by the fleeting and evanescent qualities of sound and sounded action. In this way he invokes Rancière's notion of a "poetics of knowledge" (1994; 2010) formed by an ecology of the senses and the sensible. LaBelle (2018) explores the potential embedded in a sonic thought which positions sound and its discourses in dialogue with contemporary struggles, locating it against social and political realities. That is, we can adopt ethical and agentive positions or tactics from the experiences we have of listening and of being heard. This thesis follows a similar track, in that it explores the ways in which we listen as a form of collective belonging to a place, a feeling of participating equally in the everyday sonic experience of our cities. To do so, I develop an auditory epistemology of everyday urban life, which outlines a critical theory about sound arts in urban spaces: becoming an auditory investigation of the urban experience that can produce alternative versions of this experience.

1.1.1 | The natureculture of sound: an onto-ethico-epistemology

The notion of the soundscape, developed by the acoustic ecology movement, had a prominent effect in the development of sound studies. Schafer's naturalistic thinking about sound has characterised the field; currently it is taking on new forms within more recent new materialism debates (Goh, 2017).² In the past fifteen years, debates

¹ Brian Massumi's definition of affect and emotion are fundamental for the affective turn in theory establishing "the autonomy of affect" (2002, p.23). "Affect, [...], is unqualified. As such, it is not ownable or recognizable and is thus resistant to critique" (ibid, p.28). Though affects are not recognized cognitively, they are still "irreducibly bodily and autonomic" (ibid).

² New materialism's tracings can be found in the broad Deleuzo-Guattarian scholarship, which calls the creation of geophilosophical concepts as an environmental position. The new materialisms are mainly a research methodology for the non-dualistic study of the world that wants to overcome reductionist dualisms such as matter-meaning, body-mind and nature-culture. It does so by examining how these

around “the nature of sound” within sound studies scholarship has re-animated discourses about sound as it interacts with the world at large, in terms of sociality, politics, and gender. Deleuze’s and Guattari’s work (1987) has encouraged sound studies scholars to think differently about the analytic and historical preconditions of sound, in order to address new forms of materialist and complex subjectivity (Braidotti, 2011, p.213) by promoting an ontological unity among the three branches of knowledge – science, philosophy, and art.³ This shifting away “from an epistemological theory of representation to an ontology of becoming,” according to Rosi Braidotti, is the result of a shift from a rationalist to an ecosophical mode of thinking, “the notion of a deep vitalist interrelation between ourselves and the world” where the living organism that is the cosmos is conceived as a whole (ibid).⁴ This is described as “the ontological turn in philosophy” which brought “an open-ended and relational vision of the subject” (p.214).

In the sound studies this turn has been facilitated by contributions from the anthropology of sound and cultural studies. Indeed, the ethnography of Jamaican reggae sound system culture theorizes from material auditory propagation of soundwaves (Henriques, 2011, p.xvii), to propose sonic ways of knowing, that support embodiedness. Henriques argues that sonic bodies are fine-tuned with the sound system, becoming its “flesh and blood” (p.xv); they comprise the “dancehall crowd” and in that they render the dancehall scene and the sound system a sonic–social–technological institution consisting of a corpus of knowledge that is handed down through generations. This study contributed to the challenging of what we theorise as knowledge itself: sonic bodies are “knowing, knowledgeable and they make sense;” they are highly skilled “scientists of sound” that can bring innovation to their sound system through a performative investigation of sound (p.xvi). Henriques

dualisms emerge in natural environments, in society at large, in art and in media, and in activism (Braidotti & Hlavajova, 2018, p.277).

³ The parallelism between philosophy, science, and art, should not be considered as a flattening out of their differences, Braidotti warns us (2011, p.213). It is not a matter of a simplistic isomorphism, rather the stressing out of how the qualitative differentiations between these three styles of intelligence are possible because they exist “on a common plane of intensive self-transforming life energy.”

⁴ Braidotti refers to the philosophical thinking, which is the ability to relate, affect, and be affected conceptually, while sustaining “sustaining qualitative shifts and creative tensions accordingly” (2011, p.213).

argues that instead of “scientific skills” of the *episteme*, that reiterate its hierarchy above other modes of knowing, we can use alternative Greek words for knowledge such as *techné* - indicating skilfulness and proficiency - and *phronēsis* - indicating wisdom and judgement (2011, p.xxii).

Feld’s theory of “acoustemology” (2015) brings acoustics and epistemology together and theorizes ecosophical thinking about sound further; the term emerged from his fieldwork inquiring into the local conditions of acoustic sensation, knowledge and imagination, embodied in the culturally particular sense of place resounding in the Bosavi forest and Kaluli people (Feld, 1996, p.91). Feld places acoustemology in opposition to the metaphysical or transcendental assumptions suggested by “epistemology with a capital ‘E’” (2015, p.12). Drawing on Actor-Network Theory (Latour, 2005)⁵ and on contemporary theorists such as Haraway (1988) and Strathern (2005), he advances acoustemology as a theorization of sound and listening that deals with “relational practices of listening and sounding and their reflexive productions of feedback” (Feld, 2015, p.15). Feld foregrounds relational epistemology in his theoretical model, to link acoustemology to indigenous research methodologies (p. 14), in which questions of representation, signification and subjective experience are recognized as paradigmatic and culturally specific and challenge philosophical assumptions around reality, knowledge, and the world. Acoustemology also resonates within ethical debates, particularly in accounting for ethnomusicology’s colonial past, and refers to relationality as “a cornerstone of decolonized indigenous methodologies” (Chilasa, 2012 in Feld, 2015, p.14), key to understanding accountability in human and nonhuman relations.

Another contribution to this dialogue on the nature of sound comes from feminist scholarship that has demonstrated how “the uncritical continuation of a traditional subject-object dualism” (Goh, 2017, p.292) serves as “a crude limitation on knowledge practices” (p.283). Annie Goh (2017) addresses such disputes around the nature of

⁵ Actor-Network Theory (ANT) assumes that “life is shared with others-in--relation, with numerous sources of action” (Feld, 2015, p.15), or “actants” according to Bruno Latour’s terminology (2005). According to this theoretical model, “actors plus relationships shape networks both within and across species or materialities” (Feld, 2015, p.13).

sound by revisiting Haraway's ethico-onto-epistemological project of *Situated Knowledges* (1988) to develop the concept of the "natureculture of sound" (p.283). She departs from a dichotomy of naturalism versus social constructivism in an attempt to get to a political-philosophical 'elsewhere' that will enable her to consider how sound and listening produce knowledge.⁶ Goh argues that sound studies in its infancy tried to think about sound in a kind of de-politicized and autonomous way: that sound was the sort of medium that didn't have the obligations of representation which images and language have. Instead, she contends, all sound studies scholarship should be understood "as some form of *sonic knowledge production*" (ibid, italics in text), drawing on the language of science and technology studies (STS). Goh proposes that sound studies require a greater interrogation of the subject-object in sonic knowledge production relation via feminist epistemologies. This is more often theorized through listening; thus, she proposes "sounding situated knowledges" as a method that renegotiates the dominant dualisms of traditional nature-culture and subject-object relations for sound studies (2017).

Thompson (2017b), following Goh's call for accountability in sound studies' knowledge production, examines three recent theoretical 'movements': speculative realism, object-oriented ontology, and new materialism, and uncovers common themes, such as the decentring of the social subject as the result of a renunciation of anthropocentrism (pp.266-267). Yet, she also presents how this focus on "the 'real' and/or 'material' world" that "utiliz[es] 'scientistic' approaches" (ibid) actually leaves both the subject and object implicit, as it fails to acknowledge "questions of racialized (non)being" (p.268), and "pertains to a subjectless position from which the world is observed from everywhere and nowhere, and from which bias is 'removed' through obfuscation" (p.272). For Goh (2017), this seemingly innocent oversight, read through feminist epistemologies, is in fact an integral shortcoming in theories of sonic knowledge production.

Instead, auditory culture's "narrowband" (Thompson, 2017b, p.270) approach to questions of representation, signification and subjective experience, engages with

⁶ This elsewhere is outside of the binary or naturalism/realism/materialism vs social constructivism, neither-nor.

sound and listening to prioritize situated knowledges, practices and histories. Echoing auditory culture's constitutive role in the development of a situated knowledge of sound, in this thesis I adopt a situated listening approach that avoids generalisations and abstractions, while remaining open to different social dynamics and possibilities. However, in my approach I do not attempt to "replace the eye with the ear" (Goh, 2017, p.290); I understand sound as an additional but also interrelated layer to the visual experience and in this I aim to abstain from reversing the hierarchy of the senses altogether. Rather, sound should be seen as an alternative approach to sensorial modes that can produce different conceptions of knowledge, understanding "the complexity of multi-sensoriality as intermingled variegated bodily experiences" (ibid). The importance then, of being both embodied and embedded in the acoustic environment resonates within this thesis, as I approach the production of sonic knowledge from a situated perspective.

1.2 | Sound(ing) Sound Art

Sound art is the object of this thesis. But what is sound art? What delineates this artistic genre? The term sound art is sometimes used to label anything that deviates from traditional music practices. Sound installations, spatial music and sound design are artistic practices that have brought the spatial dimension of sound to the fore. Relating sound with architecture, these practices have been the ground from which sound art has bloomed as a distinct art form. This is perhaps the reason why sound art has been characterized as the endowment of experimental music, entering into fruitful dialogue with visual arts and architecture. Indeed, this legacy can be located in the work of Xenakis, a characteristic example of the architectural capacity of sound to forge a dynamic concoction of musical and spatial elements, marking it as spatial and architectural, and therefore integral to the built environment.

Sound installations designed for public spaces are becoming more and more popular and audiences are invited to experience a wider framework of sonic experience, rendering this reality a social one.⁷ Progressively, sound installations are taking place outside the concert hall; and artists are seeking out the new prospects imparted by

⁷ Max Neuhaus, *LISTEN!* (Loock, 2005; Neuhaus, 1974).

the migration of sound to non-traditional art spaces. This sort of spatial experimentation, combined with ecological concerns, is common in the movement of 'Land Art,' setting the precedent for the development of the field of Acoustic Ecology in the late 1970s.

Acoustic Ecology elevated sound to the foreground of musical praxis, thus expanding its potential for aesthetic value as material for music-making. At the same time, it registered sound in the realm of the perception of the hearing subject. The result has been a cultivation of a sonic sociology, where music, ecology, and society are merged together as a hybrid between research and musical practice. In administering a social, musical, and ontological register for sound art, acoustic ecology increased its capacity for an auditory understanding of subjectivity (LaBelle, 2006, p.201). Thus, by developing such explicit awareness about the power of sound, it added to experimental music and the emerging field of sound art, the possibility of working directly with the soundscape (ibid). The emergence of numerous sound art exhibitions, in conjunction with academic programs dedicated to aural culture, corroborate the rise of auditory culture. This development reveals the degree to which sound art and related auditory studies are lending definition to 21st century music/sound making (p.292).

There are a wide variety of sub-genres when it comes to sound art, such as sound sculptures, sound performances, radio art, sound installations and soundscape compositions. Among those, sound performances are the closest to the traditional appreciation of a work of music, whereas sound sculptures are conceptually closer to fine arts, expanding sculptural form and imparting it with sound as its building material (Loock, 2005). Regardless of their multiple manifestations, sound artworks are in most cases site-specific, deploying the inherent attributes of locality, space acoustics and soundscape. In the context of the present thesis, these attributes, together with the issue of mobility, are employed in order to highlight the resonant properties of space and the material integration of sound as a central component of the experience of public space. This practice is described by Behrendt (2010) as mobile music, "concerned with the urban environment as musical interface, for location-aware sound art, audio annotation of physical space, and other creative applications" (Kirisits et al., 2008, p.9).

Maes and Leman (2016) present a useful set of criteria that define the nature, breadth, and meaning of sound art. In order to call a sound work sound art, they argue that there needs to be a material aspect involved, in the form of a concrete object. This can originate “from the actual sound source, or from external visual elements not linked to the production of sound, or even from a location” (p.28). They analyse and classify a wide variety of identifiers for sound art’s different features, such as its kinetic, visual, spatial, and technological aspects. Yet, they find that these are used inconsistently, and the same descriptor can have a different meaning, depending on the author’s or artist’s intention. To overcome these discrepancies, they define a set of criteria that situate sound art production as a hybrid form of visual arts and music, taking place within a space. These criteria encompass a wide variety of sound art work traits, such as concept, perception, space, site-specificity, open form, interaction, production of sound, performer, narrative, implementation of techniques and technologies, visual component, endurance, and place of presentation (pp.29-34).

Seth Kim-Cohen’s argument about “non-cochlear” art (2009) marks a move towards integrating music and visual art practice as well. According to Kim-Cohen, sound art missed the conceptual turn, resisting questioning the established morphology, material and media; persisting with the essentialist view of sound-in-itself. To address this scarcity, he revisits sound art through a conceptual turn toward a “non-cochlear sonic art” (p.xx). Kim-Cohen attests that sonic practice after the 1980s has evaded the textual, the grammatological, and the conceptual, and continued to find solace in the naturalism of sound, in “sound-in-itself” (p.87). It was not until the 1990s that a sonic aesthetic, distinct from a musical aesthetic, began to establish itself theoretically. Yet, this sonic theory, according to Kim-Cohen, has also pursued the essentialist phenomenological route continuing the debates on the nature of sound. To overcome this, he proposes another starting point in thinking about sonic theory, inspired by media theorist Marshall McLuhan’s distinction between visual and acoustic experience.⁸ The expanded sonic practice of “non-cochlear” art includes the spectator, who always carries as constituent parts of their subjectivity a perspective

⁸ McLuhan’s acoustic space is holistic, immersive, nonlinear, setting the “sensuous complexity” of the auditory (McLuhan et al., 2011, pp.124–126). His experiential essentialism of the acoustic is confirmed by recourse to anthropological primitivism: “Acoustic space structure is the natural space of nature-in-the-raw inhabited by non-literate people” (McLuhan, 2004, p.68).

shaped by social, political, gender, class, and racial experience (2009). Further, “non-cochlear” art considers the relationships between process and product, the space of production versus the space of reception, the time of making relative to the time of perceiving (ibid). Additional factors to be considered are history and tradition, the conventions of the site of encounter, the context of performance and audition, the mode of presentation, amplification, recording, and reproduction technologies (ibid). What is important in Kim-Cohen’s work is how it seems to alert sound scholars not to focus too much on sounds-in-themselves, what Cobussen et al (2016) also outline as a rigid and old-fashioned materialism.

In *The Routledge Guide to Sounding Art*, Cobussen et al (2016) introduce the term “sounding art” *vis-à-vis* sound studies, in an attempt to narrow down their research scope and to produce substantial and in-depth analysis about sonic artistic practices. They argue that sound studies include the investigation of all sounds, whereas sounding art focuses on the artistic and/or aesthetic applications of sound, existing within the aesthetic realm. Brandon LaBelle also addresses sound(ing) art’s diverse character which engages with social, ethical, economic, religious, and environmental issues: “[it] is a field of practices that may engage levels of sociality through understanding not only the harmonies but also the dissonances between place and self, and their interaction” (LaBelle, 2006, p.xviii). Sounding art employs sound as its artistic tool and educational method; it poses questions about sound’s material, aesthetic, affective, relational and expressive capacities: “as a practice [it] harnesses, describes, analyses, performs, and interrogates the condition of sound and the processes by which it operates” (pp.xi–xii). In choosing the term “sounding art,” instead of the more commonly accepted and common sound art, Cobussen et al argue in the volume’s introduction that the “-ing” in “sounding” suggests a more active predisposition of the art form, “as if something is taking place, emphasizing movement instead of stasis, fluidity instead of fixity, perhaps even energy instead of sound” (Cobussen et al., 2016, p.1). Overall, they attempt to overcome the oft-created dichotomies between sound art and music, by focusing on their similarities, their shared influences, institutional structures, and artistic and academic frameworks. In doing so, they contribute to the heated debate in relation to the ontological,

epistemological, and methodological implications of being-in-the-world with, through, and in, sound.

Cobussen et al also elaborate on the term 'art,' aiming to determine a clearer border between sound in general, and sounding art. In other words, they contemplate on Murray Schafer's call to regard our soundscapes as a composition in sound and wonder whether practices of acoustic design - be it the sonic design of a neighbourhood or designing game sounds - are expanding the concept of 'art' far too broadly. Their take on 'art' informs their "sounding art" concept, does not only refer to the so-called 'high arts'; it also denotes the level of competency or 'skill' that is required in order to create, record, or compose. Sound design then or the sounds that are recorded for an urban planning project are not established within artistic production; but they nevertheless possess aesthetic qualities. In addition to their aesthetic capacity, these sounds can communicate information and knowledge that could not be conveyed in a visual or textual manner; influencing the way audiences listen and experience the works themselves. In this context, they define "sounding art" as "human-made artistic and/or aesthetic applications of sound, be it in music, Muzak, sound art, games, jingles and commercials, multimedia events, and sound design" (p.2). In other words, sounding art works are human expressions that uses sound as material, medium and/or subject matter.

Sound art practices reflect Nicolas Bourriaud's "relational aesthetics" whereby Bourriaud (2002, p.28) notes that artistic activities since the early 1990s indicate a shift of focus of artistic practice towards the sphere of inter-human relations. Indeed, many artists have focused on creating artworks which provide novel social experiences (pp.14-18), representing a space for human relation that involves time, subjectivity, and conversation. Sounding art in that sense can be understood as "a state of encounter" (p.16) that addresses its own conventions and relational aspects in a playful way, making audiences aware of time and spaces, and engaging them with their sonic milieus. These milieus are both experience and environment. As an experience they can be an aesthetical, or anti-aesthetical, knowledge-generating procedure; while as an environment they are always social, political, ecological, etc. Sounding art works then have the potential to become initiators of communicative processes as well as those of social and political exchange (Arns, 2004). Those artistic

expressions that use sound as material, medium, and/or subject matter are thus defined as sounding art. However, it does not need to consist of sound per se. In this sense, music is a form of sounding art, and a soundscape can be listened to as if it were music.

In the same way, works that reflect on silence and the absence of sound, as well as noise, can also be potentially very telling about sound, and are considered sounding artworks as well. These sonic interpretations of sound, noise, and silence are active and vibrant in the sense that they have the potential to affect listeners, “even if the sounding art work is about the absence of sound. Hence the suffix “-ing” in sounding arts: it is always participating, influencing, teaching, confusing” (Cobussen et al., 2016, p.2). The term sounding art can also transcend traditional divisions between music and sound art, in an attempt to embrace both. Leigh Landy (2011) also argues against this separation and introduces the term “sound-based music” in which sounds, instead of notes, form the basic unit.⁹ Listeners of sound-based music are making links with their own aural experience, thus including links to real-world sounds, if they are perceived. By embracing all sounds as music-making materials, Landy argues that the potential audience for sound-based music is much larger than most people would imagine, and communities may form around these types of music.¹⁰ Here, sound-based music's content offers opportunities that are perhaps more evident than in note-based forms of music, in terms of linking life to art and offering novel forms of access to new and innovative types of musical expression that don't depend on a facility with traditional notation.

⁹ The term sound-based music was introduced in (Landy, 2007b) and further developed in (Landy, 2007a) and encompasses most electroacoustic music as well as sonic art and sound art. Terms associated with sound-based music include acousmatic music; soundscape composition; ambient music; sound-based electronic music; electronica (e.g., glitch, lowercase sound, noise music); sound-based formalized music; sound-based new performance (e.g., laptop music, new devices devised for sound-based music); sound art; sound installations; sound-based Internet music; turntablism; and a variety of forms of sound-based music rooted in experimental popular music, among others. Some authors prefer to separate sound design, sound art, and the like from music. Douglas Kahn described these tensions in his book *Noise Water Meat* (1999) and supported Landy's view that creative works focused on the organization of sound form a subset of music.

¹⁰ Landy envisions user groups for young people evolving with certain musical tendencies or involving certain themes. Art and life can certainly find new points of intersection in a socially innovative and culturally exciting new form of artistic endeavour, which ideally will build bridges between people of all ages across the globe.

1.2.1 | Soundwalks

The relationship between sound, music and mobility is a very old one. Music's pre-digital history is imbued with mobility; with troubadours and *trouvers* navigating Medieval streets carrying their flutes and fiddles. Fast-forward to the late 20th century, Walkmans, boomboxes and car stereos made music mobile in new ways, as precursors to the evolved mobile technology of today. Ultimately thus, the relational, spatio-temporal nature of sound, shares an engagement with mobile experience and the urban soundscape; as is manifesting now in mobile sound(ing) art and in the soundwalk in particular. The term soundwalk was introduced by the Canadian composer R. Murray Schafer who differentiated between two types: the listening walk and the soundwalk: "A listening walk is simply a walk with a concentration on listening" that requires the active presence of the walker who follows a leader, allowing enough space between walkers to afford "a privacy for reflection" (Schafer, 1977, pp.212–213). According to Drever (2017), a listening walk is conducted in silence as the aim is to imitate the concentrated experience of listening as in a concert hall. The soundwalk is "an exploration of the soundscape of a given area using a score as a guide, which might also contain ear training exercises" (Schafer, 1977, pp.212–213). Expanding the listening experience, the ear training exercises encourage listeners "to explore sounds that are related to the environment, and, on the other hand, to become aware of one's own sounds (voice, footsteps, etc.) in the environmental context" (Truax, 1999).

In the field of Acoustic Ecology, soundwalks are meant to raise people's awareness of the rich soundscapes of everyday life; and to conceive of listening on the move as an aesthetic experience in itself. Another member of the World Soundscape Project (WSP), and a soundwalking pioneer, Hildegard Westerkamp, defines it as "any excursion whose main purpose is listening to the environment" (Westerkamp, 1974, p.18). This embodied and situated way of experiencing the environment has been described by Westerkamp (1974) as a tactic of perceptual re-orientation. Developing further the notion of listening to the soundscape as an aesthetic experience, Andra McCartney recounts the soundwalk as "a creative and research practice that involves listening and sometimes recording while moving through a place at a walking pace" (2014, p.212). The added element of creativity in McCartney's practice, utilises sound

recording technologies to enable soundwalk participants to capture their experience. In this case, it is the technological mediation that allows for a more immediate engagement with the acoustic environment, which happens to be recorded at the same time. From a traditional acoustic ecology perspective, sound recording technology might be considered as breaking away from WSP's and Schaferian principles of natural listening, yet, the person recording the soundwalk is directly engaging with their environment and concentrating on listening. In that sense, soundwalking is a creative act, as it brings "the attention of the audience to these often-ignored event practices and processes" (ibid), whether it is recorded or not.

Within this context, the soundwalk may then become a pedagogic device that encourages walkers into listening to the complex and often multi-cultural nature of urban space, so that they better understand the urban environments in which they live. In the words of Butler (2006), "[s]oundwalks are landmarks in sound; invisible artworks that have an added dimension because they are an active multisensory way of understanding geographies, in both time and space." Soundwalks may function as an invitation to participants to interact with the existing soundscape of a specific location; and in many occasions soundwalkers are contributing to this experience with the creative input of their own recorded sounds. They experience their cities inciting questions about the relationship between self and place and highlighting public/private experience of urban space. This goes beyond the purposeless walk of the flâneur, even though soundwalking conjures the psychogeographic traditions of the Situationist practice of the *dérive*, because it prioritizes situated sonic knowledge: "we listen through place, not just to it" (Lorimer & Wylie, 2010, p.12). Soundwalks then become "a "live" embodied, active, multi-sensory way of understanding geographies in both time and space" (Butler, 2006, p.905). This embodied and situated listening has informed the affective materialisms that have instructed non-representational theory in geography prompting wider debates on materiality (Anderson & Wylie, 2009), which also resonate with recent sound studies scholarship.¹¹

¹¹ Non-representational theory has critiqued the emphasis placed on interpretation and meaning by the social sciences (Thrift, 2008).

In recent years, there has been an increase in soundwalk projects related to locative and mobile audio technologies, which design or record sound experiences in situ and deliver them through headphones. This has informed the different soundwalk practices, introducing the concept of the audio walk, where narrative and location are woven together to create a site-specific acoustic environment that uses the physical structure of the city. In this type of artistic exploration of urban space, the combination of narration and sonic re-composition (McCartney & Paquette, 2012a; 2012b) is also designed to stimulate “active listening” and encourage soundwalkers to reflect on everyday life and rediscover otherwise mundane spaces.¹²

Within this thesis, the soundwalks I focus on are accessible via a customized GPS-based smartphone app. Listeners were invited to explore and appropriate an area through sounds and to compose their space and sound by walking, while becoming aware of the rich soundscapes of everyday life. Via the app, sound recordings are attached to different locations and are then replayed via headphones, depending on the listeners’ actual locations. In this case, the soundwalk does not feature a predefined route; it is rather listeners’ paths that shape the composition, which is open to exploration and change. Their footsteps also shape an alternative map of the area, one that provides rich accounts of their personal experiences, individual tactics and agency. This provides a consideration of space, intertwined with contemplation on the sounds that are heard within, but also outside it, such as moments of intrusive sound penetrating the headphones, or the failure of the GPS signal, or a blocked route. For Coyne (2015), this is a classic example of a spatial transition taking place, which can also be described as an “aha moment,” if it involves “some struggle, even frustration, and leads to the achievement of a goal, or perhaps a reward,” which in this case it is the feeling of immersion. The expectation, anticipation, and excitement that Coyne debates, are the entanglement of sound and space in the soundwalk experience.

Soundwalks are an example of the interdisciplinary characteristic of sounding arts, in the way Cobussen et al (20216) understand this art form’s inclination to employ sound as an active and vibrant subject matter. They compel a perceptual awareness of the urban environment, not only aural, but full body, perception. In taking the

¹² Listening conceived as an active and embodied process.

device out for a walk, soundwalkers can experience the textures of life as it is unfolding through the technological mediation of the digital enhancement, to uncover what is hidden in the background. It is noteworthy that this interdisciplinary genre of sounding art features various prominent female creators who are major figures in the field (Bosma, 2016). Indeed, Andra McCartney, a prominent soundwalk expert herself, notes that unlike other types of electroacoustic sound art, which are more often dominated by well-known male figures, many of the best-known soundwalk practitioners are women, such as Westerkamp, Corringham, Kubisch, and Cardiff. This, she affirms, indicates the potential for altering the gender dynamics in relation to sound and technology (McCartney, 2014, p.220).

In this, we can identify various approaches regarding the practice of the soundwalk; be it that the focus falls on the act of listening itself (listening walk), or on the recording of the soundscape to recompose and experience it through headphones (sound walk), or on the interweaving of location and sound to produce a site-specific narration (audio walk). Often, these differences are due to the diverse backgrounds of their makers, which reaffirms the interdisciplinary character of the soundwalks. But there is also common ground. Regardless of the use of technology, the focus is always on sound (or its absence), with the concert stage abandoned, and the conventional musical roles of composer, performer and listener, diffused.

Seen within such a milieu, this thesis focuses on soundwalks that take place in (urban) space; are technologically mediated, geo-located and experienced through headphones; and are co-composed by artists and participants. In such cases themes can vary, but most commonly they revolve around cultural heritage, aural history and memory, or reflect on issues of gender, class, identity of the intersubjective cultural world. Regardless of their thematic construct, field recordings associated with place are experienced through the headphones, which at the same time allow the external soundscape to infiltrate. Adding a layer of sonic experience as a means of increasing participants' engagement with their environment, thus provokes a dialogue between them. This approach to the use of mobile audio devices, creates a "third space" (Marcus, 2012), that is not the privatized "auditory bubble" described by Michael Bull (2007) in relation to the mediation of the aural experience of the social through mobile sound technologies. Instead of achieving "a level of autonomy over time and

place” (Bull, 2005b, p.344), the hybrid space of the soundwalk brings together spatialities, temporalities and materialities and creates a heterotopic space (Foucault, 1986) of encounter. Soundwalks also represent a relevant example of changes to conventional, gendered musical roles i.e. a shift from predominantly male composers to more female makers from various disciplines, which have gone in tandem with parallel transformation of fundamental musical notions and practices, related to authorship, performance and listening.

So, what happens when you ‘lend a musical ear’ to your experience of the world? Here, soundwalks have been the subject of criticism, because they can cut off or exclude walkers from specific environments or can dictate specific routes. They can also be completely restrictive for bodies with mobility issues. On the other hand, soundwalks are celebrated as opportunities to connect with spaces, because they offer additional information about them. Alternatively, they may invite participants to ‘speak’ about or visit places that they wouldn’t visit otherwise. This is what drew my interest to the concept of soundwalks as artistic practice: do they cut people off or are they connecting them to, and also through, spaces? I am absorbed by soundwalks that mediate a hybrid experience between reality and fantasy, as well as the relationship between real/physical and hybrid/augmented space.

1.2.2 | Soundmaps

According to de Certeau, the variety of walking lines leave their traces on city maps; a way to transcribe the walkers’ paths and their trajectories. He adds though, that these lines can only hint to memories which, just like words, only refer “to the absence of what has passed by” (1984, p.97); they are the lines of orientation that direct bodies and spaces. After all, life is lived not just in places but also along the lines our paths delineate. Mapping is then the relation between lines and the surfaces on which they are drawn (Ingold, 2007b, p.2). Gerlach (2014), drawing from Deleuzo-Guattarian cartographies, sets out to re-describe these lines as affective processes that inform cartographic trails, rather than metaphors, and argues that mapping “is all to do with distributed and diverse performances” (p.28). The practice of walking, listening, and recording the soundscape, seen as a performative sensory mapping, offers an expansive awareness of locality, territory and connection to subjectivity. The sonic politics of everyday mapping are intertwined with contemporaneous digitally

enabled mapping practices in the (interactive) soundmap. Indeed, the soundmap is a relatively recent invention, having emerged at the intersection of soundscape studies, acoustic ecology, and sound art practices in the late 1990s (Ceraso, 2010).

While different soundmaps have different methodologies, ideologies and goals, it can be argued that engaging with soundmapping contributes to the debates on how representations of time and space are performed between and across the senses (Thulin, 2016). Soundmaps are geographic collections of distinct “sonic inscriptions”¹³ of a place usually involving geo-tagged audio recordings that represent “sonic places”¹⁴ in different ways: they consist of a map and located soundscapes. From the early 2000s to today, there have been at least 100 different online soundmapping projects that have been reproducing Cartesian logics (Mechtley et al., 2013). They use Google Maps or OpenStreetMap as a cartographic base layer and engage field recordists, artists and the public in recording and supplying audio content. They bring together visual and sonic epistemologies and practices, and they enhance traditional cartography with a different sensorial approach to understanding space, place, and territory. Turning to the senses, according to Thulin, can incite new ways for rethinking the map (2016). In this, soundmapping frequently involves using mobile technology – ranging from dedicated, high-fidelity audio-recorders to mobile phones – to make recordings ‘in the field’ and to log GPS coordinates. Once uploaded and embedded in a map, sound recordings can be listened to online by visitors to the website, regardless of where the listeners are located.

By contrast, ‘locative audio’ refers to practices in which audio can only be experienced in a particular location. Often, sounds are tagged with latitude/longitude coordinates and are played back on a mobile device, such as a smartphone, when the device’s GPS receiver registers the coordinates of the tag. Locative audio can be thought of as a particular kind of locative medium; a term that calls forth a “diverse array of location

¹³ An inscription is the act of recording a listening into a particular technology of dissemination and transmission (Ochoa Gautier, 2014).

¹⁴ The phrase “sonic places” that Cusack introduced as the title of the Berlin Favourite Sounds project, has become a term that describes “a locality in a city that is sonically coherent enough to be studied as such” (Lappin & Ouzounian, 2015). “The city, therefore, has many, many thousands of sonic places, but essentially the definition of it is the relationship between how far your ears can hear and the physical layout of the place [... From a listener’s point of view, you’ve got as far as your ears can hear” (ibid).

aware technologies and practices,” whose common thread is their engagement with “media of communication that are functionally bound to a location” (Wilken, 2012, p.243). Soundmapping and locative audio are obviously integrally related, and mostly separable only in terms of emphasis. Indeed, whereas soundmapping is aimed at building a representation of a place that can be accessed anywhere, locative audio is aimed at providing a situated experience, for which the particular mapping that makes that experience possible, is not necessarily revealed to the user. Of course, some soundmaps combine both; offering a soundmapping platform that also exists as a mobile app where playback of mapped sounds can be triggered by the user’s location. With the growing ubiquity of both mapping and location-aware technology, it is likely that soundmapping and locative audio may be combined even more frequently and fully in future. Taken together, soundmapping and locative audio comprise a broad array of practices that connect sound to places, in and through mobile technology; and it relates to what Tristan Thielmann also notes when he contends that “annotative and phenomenological geomedia [...] will therefore presumably be almost impossible to maintain in the future” (2010, p.6).

Thulin (2016) offers a comprehensive mapping of the contemporary practices that blend cartographic and sonic activities. He proposes the term “cartophony” instead of “soundmapping” – arguing that the latter is associated with the hierarchical, top-down, mimetic approach to the representation of places; while cartophony, in echoing the ideas of non-representational geographies, is used as an attempt to speak to how practices of sound and mapping may feed into one another in a broad array of ways (ibid).¹⁵ He identifies five types of combinations between sound and cartography that inform practices of online soundmapping. These are “sound-as-map” where listening is employed to map the abundance of spatial and locational information (e.g. practices of echolocation); “sound-into-map” where sound technologies are used to generate maps (e.g. bathymetric maps); “map-into-sound” where certain aspects of the map are made audible (e.g. cartographic sonification, sonifying maps for visually impaired

¹⁵ Non-representational geography is focusing on “how life takes shape and gains expression in shared experiences, everyday routines, fleeting encounters, embodied movements, precognitive triggers, practical skills, affective intensities, enduring urges, unexceptional interactions and sensuous dispositions” (Lorimer, 2005, p.84).

people); “maps-of-sound” that represent acoustic properties of places through visualisation (e.g. noise maps, silent maps); and “maps-of-sound-as-interfaces” where the map is not only to used represent sounds, but also to guide the map-user through a sonic experience (e.g. soundwalk graphic scores, hybrid soundwalks on apps).

Droumeva (2017) proposes a broader way of classifying soundmaps: as process and as public engagement. The “sound-map-as-process” presents a normative approach of combining sound and mapping, which places the greatest value on high-fidelity recordings (ibid).¹⁶ Such soundmaps that consist of indexical field recordings pinned to a cartographic base layer, may function efficiently as (soundscape) archives, since they are effective in transmitting a large amount of sonic information in a way that can be easily digested.¹⁷ Often, the idea behind such projects emphasizes towards documentary and conservationist agendas, related to heritage and preservation. The “soundmap-as-public-engagement” approach then promotes practices involving the listening public. These audiences, whether they are intended or incidental, comprise an integral part of the communicative and political elements of the soundmap by contributing to the development of an alternative, more inclusive cartography.

Beside the communities of recordists, researchers, artists and other contributors of sound files that formed around various soundmapping initiatives, there is also the listening public that participates in this audible reterritorialization of place via listening (Droumeva, 2017). I use the term ‘acoustic communities’ to include such public participants, formed by “the geographies of the regions represented or the imagined communities of social media networks” (ibid), and by new materialist expressions of voicings of human-non-human relations.¹⁸ The soundmaps that are

¹⁶ World Soundscape Project (WSP) (Schaefer, 1977) and other early soundscape initiatives promote high-fidelity audio recording and hobbyist phonography.

¹⁷ An archive is an effect of multiple forms of contact, including institutional forms of contact (with libraries, books, web sites), as well as everyday forms of contact (with friends, families, others) (Ahmed, 2014, p.14).

¹⁸ Drawing on a range of feminist new materialisms, the question of how sounds are “involved in the creation and organisation of experience” (Anderson, 2018) aims to deepen the understandings of the relations between people, animals, and objects. These new materialist expressions of and listening to voicings of human-non-human relations combine acoustic ecology, historical anthropology, experimental sound design—including sound art—sonic branding, and audio production (Pinch & Bijsterveld, 2012) to enhance dialogue in the emergent sound studies discipline. Such vibratory

produced by these acoustic communities may call into question the possibilities across species and things to co-produce space (Neumark, 2016). Simultaneously, there is an increasing convergence of sound art and mainstream practices, as tablets and smartphones provide platforms for distributing experimental works, with different possibilities and avenues of accessibility from those of art's more institutional contexts. Though the recent acquisition of Bjork's *Biophilia* app by the MoMA – the first mobile device application in its collection (Beaumont-Thomas, 2014) – is a major legitimization of the medium, there are numerous apps that simply could be considered works of art if presented in a certain context; made available without institutional framing devices. My interest throughout this dissertation is thus not restricted to apps and projects that are explicitly positioned as mobile sound art (whether through self-identification or legitimization by a third party), but broadly with soundwalking and soundmapping practices, which engage with mobile sound with an ear to the convergence of aesthetics, the everyday and the political possibility of sound.

1.3 | Hypothesis and Research Questions

There are various degrees of sonic situatedness that I encountered as the writer in relation to an acute awareness of my role and position as the researcher, writing about sounds for research purposes. They all go back, to some extent, to the work of R. Murray Schafer and the study of Acoustic Ecology, whose use of the term “soundscape” resonates, albeit critically, in this thesis.¹⁹ Acoustic Ecology elevated sound to the foreground of the musical praxis, thus expanding its aesthetic value as the material for music-making. By developing such explicit awareness about the

materialism (Goodman, 2009) focuses on the primacy of the synesthetic; and the sonic is “emphasized in its sensory relation, in its intermodality, as rhythmic vibration, in excess and autonomous from the presence of a human, phenomenological subject or auditor” (p.9). In moving beyond an anthropocentric approach to listening, soundmaps featuring recordings from different settings, offer rich ground for exploring the enormous complexity of relationship between non-human agents (animals, atmospheres/density, geological formations, landscapes, and so on) and every possible understanding of the world through listening practices (Pisano, 2017, p.474).

¹⁹ For a full account of the concepts of Acoustic Ecology and acoustic communication see R. Murray Schafer, *The Soundscape: Our Sonic Environment and the Tuning of the World* (1977) and Barry Truax's *Acoustic Communication* (1984).

power of sound, it added to experimental music and the emerging field of sound art the possibility of working directly with the soundscape. Yet, instead of opening up to the possibility for all sound, Acoustic Ecology shut down other possibilities and potentialities of auditory experience, by classifying sound on the basis of its aesthetic value. Even though its tutelages are now outdated and associated with the aesthetic moralism of Schafer's environmentalist practice, I argue that the term soundscape has been productive of a wide range of approaches that animated sonic scholarship; and for this reason, I use it.²⁰

In order to render soundscape a phenomenon of aural (among other) experiences, a synergy of spaces, bodily and sonic-social practices, as well as sonic-social-technologies are taking place, forming the assemblage of the acoustic city space. With the addition of technological mediation, Born argues that it is necessary to coin the rather awkward epithet – “musico- or sonic-social- technological assemblages” (2013, p.69) – to indicate the multiple, non-linear vectors of mediation at work, which are shaping acoustic spaces and communities. Those assemblages are also co-composed of bodies, institutions, conventions, representations, methods and practices (Born, 2013). These bodies are both human and more-than-human, inhabiting and moving in spaces, performing practices, creating technologies; animated by sonic and musical agencies and enlivened by the heterogeneous forms of sociality and intersectional identities. The present thesis thus investigates the spaces in which these bodies gather, and focuses on listening, walking, and mobile audio devices to explore how they co-compose acoustic city spaces and acoustic communities.

In this thesis then, I showcase how people and places affect the structure and content of sound art by exploring the interaction between sound(ing) art and public space. I argue that sound art generates new ways to think about our cities and the ways we exist as social agents within them. Dealing with sound is, first of all, listening to sound; to musical sounds, to natural sounds, to urban and rural sounds, to industrial and

²⁰ Acoustic ecology's aesthetic moralism has been extensively discussed by Marie Thompson in her book *Beyond Unwanted Sound*. Thompson argues for a radical reconfiguration of acoustic ecology's moralistic characterizations of acoustic environments and proposes a shift from Schaferian aesthetic moralism to a Spinozist ethics of noise and silence (Thompson, 2017a).

electric sounds: in short, listening to the world around us. Within the context of this thesis, the overall theme focuses on sound(ing) art works that exist in space, real, imagined, or hybrid, and which require audience participation and engagement with locative and mobile audio technologies for their completion. Audience in this sense become participants, individually and collectively involved in creating the content. Interpretation and creative expression are encouraged through participatory, improvisational, and playful audio content. My aim, therefore, is to show that the development of a sound art practice, where the everyday and artistic listening practices intertwine with agency and creativity, assembles inclusive acoustic spaces, within which emerging acoustic communities are empowered to construct acoustic city spaces.

For this, I devised a set of research questions that will enable me to test this proposition. These research questions revolve around five different themes, each addressed in the five following chapters. How do we experience sound(ing) art? Is it a matter of the ear or are there multiple ways to experience it? And what does it say about our experience of place? Then, I seek a sonic epistemology for sound art. Which method or set of methods can we apply for researching sound art practices? Next, I turn to a case study to explore the relation between body and physical space. I ask, what is the application of playful, collaborative and creative sonic affordances in urban design and in the right to the city? Following this I then address the concept of the soundmap. What are soundmaps and how can we use them to capture and study the sonic environment? Finally, I set out to define acoustic communities and acoustic space through a sound art outlook. How do acoustic communities form and emerge? In what ways do they experience, document, and share their experience of space? How do sonic-social-technological assemblages engage with particular spatial dynamics? Finally, in the thesis conclusion I address the potential place-making and community-making power of sound art.

1.4 | Thesis Outline

Chapter 1, as an introductory chapter, begins with an examination of the auditory culture that understands listening and sound(ing) art as ways to engage with the urban auditory. I begin with locating sound art works within the growing field of

sound studies that brings together various disciplines to pay attention to all sounds. Such contributions, both within or outside the art context, are theorizing how knowledge is produced through sound and listening. In line with contemporary theorists I argue in favour of the concept of “natureculture” to contribute to discourses about sound (art) as it interacts with the world at large, in terms of sociality, politics, and gender. This approach to questions of representation, signification and subjective experience is informed by auditory culture. I posit that in order to resonate auditory culture’s constitutive role in the development of a situated knowledge of sound we need to engage with sound and listening and prioritize situated knowledges, practices and histories.

Then, moving forward, Chapter 2 takes up the role of a literature review on the themes of sound, place, and listening. In asking how we experience sound(ing) art, it goes on to review different listening practices and ideologies. These listening modes are less about becoming newly responsive to sound, and more about the active, situated, and mediated conceptions of listening, already happening but usually passing unnoticed, when we experience a sound art work in public space. This requires more than just the ear or the brain; it may assume the visual, the tactile, or the kinaesthetic register. In researching this phenomenological listening, I also acknowledge the affectivity and the materiality of sound, which as a physical, acoustic phenomenon affects the entire body, and may determine our interpretations of what is being heard. In short, this chapter is about an ontology of sound and its capacity to affect, effect, and make place. However, we don’t all listen from the same place; and therefore, I turn to the philosophical tradition of phenomenology to understand various relational intensities. These include intentionality, as well as embodied connectedness and situatedness between listener and world, subject and object, private and public domain, the animal and human, and material and immaterial. Here I ask how such relationships contour our experiences of place, and once again return to sound art and listening, to contemplate on sonic ways of knowing, sensing, animating, and sounding the idea of place.

Chapter 3 of this thesis seeks to formulate a sonic epistemology for the diverse sound art’s angles by looking at how different disciplines and methodologies approach sound. In this, it tries to answer the question of which method or set of methods are

most appropriate to the study of sonic urbanism. Sound artists pose different questions pertaining to the role, position, and function of sound(ing) art and the manner in which it can be both reflexive and constitutive of social, cultural, political, religious, ethical, and perhaps even biological or cognitive developments. Conducting research into the ways in which people experience and interact with public space through sound art, poses several challenges, because it relies on three basic but interrelated structural layers: mobility, space and sound. First, two ephemeral and transient phenomena – walking trajectories and sound – need to be co-examined; and secondly, the experience of space through technological mediation. In this, relevant research tools and methods need to be employed to address the theme of the mobile listening public and to offer a better understanding of the embodied experience of space through sound and movement. Here I understand the urban sound environment as an object of description or transformation; and this calls for the consideration of multi-methodological approaches which can overcome complexities in the assessment of data, present in all qualitative research methodologies. These methodological considerations form the core of this chapter, which combines ethnographic and para-ethnographic tools to advance appropriate methods for the research of artistic practices in urban spaces, which involve walking, listening, and recording sound. Indeed, I propose the use of an interdisciplinary research methodology, in the form of an adaptable and innovative methodological model: a methodological triangulation of ethnographic tools, interviews and experimental auditory phenomenology, which views sound walks/maps as a method for knowing soundscapes. Ultimately, a research methodology for artistic practices that use mobile audio devices, can contribute to the development of a new interdisciplinary theoretical and methodological framework to investigate hybrid sonic urbanism.

Chapter 4 thus employs these tools to undertake a phenomenology in sound and presents the *Impossible Inaudible Soundwalk*, the case study of a soundwalking and soundmapping workshop, as well as the stages that led to the development of an experimental, vernacular, collective soundmap. Researchers, students, artists, and locals were brought together to explore and theorize on sound's relation to place and territoriality, together with the immaterial realms of their conscious and sensory experience. The *Impossible Inaudible Soundwalk* invited participants to co-produce a

walking sound art work; a soundmap of an area that can be experienced on foot. These participatory processes allowed for social expressions to emerge, while the sound design shaped participants' experiences of the everyday life and sonic identity of their city. This work is not just perceived as aesthetic-artistic installation, but also as agential, involved in the social and cultural development of the city. Sound enables a broader understanding of the environment and its connections to those who inhabit it. It is a force that has the capacity to constitute the world and to simultaneously be a medium for constructing knowledge about it. Its inherent multiplicity thus involves the interplay of the phenomenology of listening, the physical vibration in materials, and the making of meaning, such that all three need to be considered simultaneously. In particular, I consider how the use of technology expanded the phenomenological space in which the soundwalk happened, as well as the sensory modes of audience perception of the space. This chapter therefore describes the motives, the stages, and the models of participation that took place during the various phases of the soundwalk workshop and post-workshop reflection, as well as the role of mobile audio and geolocation technologies in the experience's creation.

Chapter 5 of this thesis addresses the potency of soundmapping to highlight how sonic affordances can be applied to our urban designs and everyday spaces. Soundmaps that are developed through collaborative processes aim to research urban sonic narrations in the city. Sounds act as knowledge pathways, and the ways in which they are captured, used, and represented, produce a great variety of soundmap categories, which this chapter maps. I discuss a collection of soundmapping and soundscaping projects that, in deploying contemporary mobile practices of field recording, both construct and react to different spaces. I argue that we can deploy an expanded sonic cartography to investigate how citizens may (re)conceive public urban space as a performative space and how they can be involved in it. The idea of 'lending a musical ear' is applied to the cartographic practice that develops audile techniques for addressing the (urban) sound space. By appealing to the sonic memory matter, I explore themes of preservation, sonic memory, cultural heritage, identity, and belonging to a place. Through an analytical and critical approach to the concept of the soundmap, I investigate how far we can push the boundaries of the typical cartography, so as to produce diverse discourses in the fields

of sonic and spatial practices, auditory culture and performativity, experimental cartography and sound art. This approach is in line with scholarship that views maps not as static objects, but as communicative and political processes that are continually negotiated and contested. The advantage of such an outlook is that it disputes binary separations between representations and practices, as well as between the production and consumption of sound, music and space.

Chapter 6 then considers the possibilities afforded by sound(ing) art to provoke the creation of acoustic communities based on creative collaboration and distributed agency. Sound is an essential factor that we use to capture the physical aspect of the space, as well as to connect with it, because of the emotional impact it creates in people; playing a crucial role in our awareness of our own everyday environment from a perceptive perspective. Here, the consideration of sound in relation to everyday activities and their social implications, enables the emergence of new ways for people to experience, document, and share their experience of their soundscape. Such sonic urbanism implies that one does not just take interest in noise in the city, but is informed by the practices, concepts, politics, and aesthetics of making organised sound; and not just as a cultural phenomenon taking place in the city, but as a set of ways of thinking and ways of doing, i.e. in participating in acoustic communities that operate in the realm of the audible. I explore how political ecologies of sound shape our experiences of everyday life and acoustic space and I define acoustic city spaces as spheres in which sound art takes place. For this I adopt a critical approach to sound(ing) art in order to highlight its ethico-onto-epistemological and political potentialities. I do so by integrating the aesthetic and phenomenological perspectives that have often dominated reflection in this field, while also turning my attention to sound, noise, and play, to provide a definition of acoustic communities and acoustic space through a sound art outlook. Ultimately, the themes that this chapter addresses, draw from theories of listening and phenomenological perceptions of sound and space, which have been discussed in previous chapters to address how we relate to others, ourselves, and spaces we inhabit.

In the conclusion of this thesis, chapter 7 theorizes about listening as a situated critical praxis. I discuss the ways in which sound(ing) art has the potential to produce acoustic communities infused with sonic agency. Sound, as an additional but also

alternative layer to the visual experience, constructs in-between or heterotopic spaces of lived experience, which can be performed in sound(ing) art. This highlights a political and agonistic possibility for sound art that requires a situated listening praxis if we are to engage in creative and expressive, critical sound art. Focusing on sound art as a tool and tactic for collective and distributed action and as a way of co-production of situated spatial knowledge can contribute to the ideas we have about power, representation and participation in public space. Sound artists include a multiplicity of perspectives in their works, especially in those where participants are involved in the production of the artwork. However, since it is not possible to involve every single perspective, there is the danger when voices are unified, of almost recreating a replay of the hegemonic model. On other occasions, artists create sound art works that promote the agonistic model by bringing to the fore the conflict between those multiple perspectives in the public domain. It is not enough to make the soundscape available as a piece of information that can be archived, preserved, or experienced; it must be performable and, in this manner, ethically and politically usable. Sound art is not just about the practices of doing and undoing knowledge, but also about the subjects of knowledge who engage into a critical listening praxis. For sound art to be critical it needs to create new networks, new collectives, and new encounters. Therefore, by highlighting the ethico-political foundations of sound(ing) art I explore the potential of collectively perceived soundscapes, which by inviting public participation and contribution, can empower acoustic communities to engage with their sonic environment and reclaim their cities.

Chapter 2 | Listening to Sound Art and Place

2.1 | Introduction

How do we experience sound(ing) art? Or are there multiple ways to experience it? Sound art works are experienced and perceived through our ears; this means that we listen to sound art. However, in many cases, sound art works feature elements that require more than just our auditory organ and certain parts of our brain; be they visual, tactile, or kinaesthetic, etc. The sound(ing) art works that this thesis discusses, add tactility and kinaesthesia to the auditory perception. Listening to sound art in this case becomes a multi-sensorial experience, rather than just an affair of the ear. Sound is both heard and felt: “to be surrounded by sound is to be touched or moved by it” (Connor, 2004, p.153). Listening and touch are closely interrelated then, since sound as a physical, acoustic phenomenon always affects the entire body, not just the ear. We listen with our whole bodies, or as Ihde describes, “I do not merely hear with my ears, I hear with my whole body. My ears are at best the focal organs of hearing” (2007, p.44). Apart from phenomenological listening, this point is also established physiologically: sound literally touches you. Sound waves vibrate on our eardrums, but also touch the skin of our entire body. Listening also becomes feeling, and as a feeling, it can affect and determine our interpretations of what is being heard. It is a physical, acoustic phenomenon that affects the entire body. This niche strand of sound studies, focusing on the ontology of sound - a philosophical naturalism - develops an ontology of sonic vibration and a material ontology of sound, focusing on its vibratory bodily and affective force (Goodman, 2009; 2012; Cox, 2011; 2018). This has been problematized by many scholars for its partiality of perspective, particularly when coming from a line of already well-established, predominantly white and masculinist canon (Thompson, 2017b; Goh, 2017), as well as its shortcomings when directly confronting questions of culture and value (Kane, 2015).

This chapter draws from the philosophical tradition of phenomenology, which, from Husserl and Merleau-Ponty onwards, has investigated the idea of a relationship of listening as being-in-the-world. I turn to listening in order to understand relational intensities such as intentionality and embodied connectedness and situatedness between listener and world, subject and object, private and public, animal and human,

material and immaterial; and to ask how such relationships contour the sound(ing) arts. Don Ihde developed this approach in his *Listening and Voice: A Phenomenology of Sound* (2007), and later, in what he calls “whole-body” perception. Yet more than a hundred years before Ihde’s phenomenological listening, attentive listening was an important part of the “way of science” (Goethe, quoted in Henriques, 2011, p.105), central to a particular scientific methodology described as a *delicate empiricism* (ibid, italics in the original). Furthermore, taking into consideration the phonographic character of the sound art practices of soundwalking and soundmapping, the effects of the tools, instruments, machines and technologies on listening audiences are considered, without separating technologies from social and cultural relationships. This approach calls for the development of “audile techniques,” following Sterne and Mauss, to broaden the conception of technology to include bodies, human and more-than-human. As Connor reminds us, “sound literally moves, shakes and touches us” (2004, p.157) but we are not all moved or touched in to same way or in the same direction; rather our positionality is based on our unique embodiment, giving us a particular stance, location and orientation in our world (Ahmed, 2006).

2.2 | Listening to the soundscape

Recent cultural-historic scholarship has viewed the soundscape as the sonic characteristic of an era, society or culture; and for the past fifteen years, sound studies scholars are investigating the part that sound plays in the construction of the reality of the world. Here, soundscape offers the interpretation of a world of things rendered in acoustic forms, by drawing attention to the sensory register. The soundscape, according to Schafer, is a conceptual apparatus which designates an acoustic environment that listeners experience as surrounding them in space: it refers to environmental sound as found in given places and at given times. The term was established in parallel with the development of the World Soundscape Project (WSP) in the early 1970s.²¹ Initiated by R. Murray Schafer and others at the Simon Fraser University in British Columbia, the WSP aimed to raise consciousness about the effects of sound on the human condition, by analysing and collating environmental

²¹ Now known as the World Forum for Acoustic Ecology.

sound through recordings, information databases, community surveys, workshops, artistic and musical works, and research projects.²² Schafer's (1977) definition of the soundscape, although general, has been the most popular, since it allows sound studies scholars and sound artists a greater degree of freedom in interpreting the term soundscape in their creative practices.

Kelman argues that Schafer's definition of the soundscape carries ideological and ecological messages about the meaning of sounds, as it is suffused with instructions about how people ought to listen. For him, the problem is that today the term has become ubiquitous: "[i]n its near-ubiquity, the term has come to refer to almost any experience of sound in almost any context" (2010, p.214). Schafer, Helmreich argues, "articulated the soundscape as a sonic version of landscape, an object of contemplation" (2010). In this sense, soundscapes are also things in the world. However, the question of representation, that is who speaks on behalf of whom, is clearly related to social, political, and ethical concerns, as the soundscape both affects and is an effect of social practices, power relations and ideologies. According to Schafer, the soundscape is a reciprocal relationship of sorts, where people in some way echo their soundscape in language and music. Steven Feld (2012) used this idea to produce an ethnography of sound, or study of sound as a cultural system, in order to relate the importance of acoustic ecology and connect the environment with musicality and poetics, particularly amongst the Kaluli people in the Bosavi rainforest in Papua New Guinea.

Not all scholars followed in the footsteps of soundscape analysis or soundscape composition however, or even agreed that such a term has any use. Tim Ingold denounces the term soundscape as "a conventional means to describe the acoustic world that has now outlived its usefulness" (2007a) and expressed his belief that any soundscaping attempt is *en masse* problematic, in a short but powerful essay entitled *Against Soundscape*. There, Ingold alerts us about the risk of losing touch with sound in the same way visual studies have lost touch with light. He suggests that soundscape "objectifies sound rather than treating it as experiential" (ibid), highlighting that this

²² Such as Hildegard Westerkamp, Barry Truax, Howard Broomfield, Peter Huse, Bruce Davis, and Jean Reed.

attributed stability makes the notion of a soundscape inherently incompatible with sound, which “is neither mental nor material, but a phenomenon of experience, that is, of our immersion in, and commingling with, the world in which we find ourselves” (ibid)). As a result, Ingold argues, we should not think of sound as something that we hear; instead, we should think of it as a medium we hear *in*. This mode of thinking in sound that Ingold advances has been closely related to the concepts of embodiment and immersion.

When it comes to the translation or interpretation of the soundscape, Helmreich’s (2010) visual approach carries potential. Drawing from an example of underwater acoustics, Helmreich argues against immersion, towards the analytics of transduction (2010).²³ He notes that not all auditory realms are soundscapes for the human ear and debates that “the transductive work [...] is the foundation of an immersive soundscape,” in that he proposes a theorizing of listening that hears inside, outside and—ultimately—beyond the notion of the soundscape. Voegelin joins Ingold’s assertion that the acoustic environment is not really a soundscape in the etymological sense of the word: “it is not a scape, a scenery, a place to look at from afar” (2014, p.10), but her consensus with Ingold goes only this far. In advancing a phenomenological possibilism, Voegeling (2014) follows Merleau-Ponty’s search for a primacy of perception, arguing that “[t]he soundscape is then indeed not a slice of the landscape, as Ingold points out, but it is one slice of all the slices that make up the landscape in its commingling existence” (p.45).

2.2.1 | Listening modes

The term “acousmatic,” originally developed by Pierre Schaeffer (Malina & Schaeffer, 1972) and adopted by Michael Chion (1994), describes the situation wherein one hears the sound without seeing its cause. The origins of the term acousmatic can be traced to the Acousmatics; they were the disciples of Pythagoras, who followed his teachings for five years without being able to see him, as he spoke to them behind a curtain. Chion argues that the acousmatic situation can modify our listening, allowing us to gradually stop attending to its cause, in order to more accurately perceive its

²³ Transduction is the transmutation and conversion of signals across media (Helmreich, 2010).

own inherent traits (ibid); while differentiating between causal listening, semantic listening, and reduced listening. These three modes of listening address different objects; such as causal listening, when listening to a sound in order to gather information about its cause or source; semantic listening, in referring to a code or a language to interpret a message; and reduced listening, which focuses on the characteristics of the sound itself, independent of its cause and of its meaning. Augoyard and Torgue (2005, pp.130–131) understand acousmatic sonic environments through the sonic effect of “ubiquity”.²⁴ They define ubiquity as the paradoxical situation where it is difficult or impossible to locate the sound source, yet we know that it is actually localized. As an event then, sound takes a life of its own as it is dissociated from the point of its production, and according to Revill, raises questions about the origins and therefore the authority of sound (2016, p.10).

Acousmatic listening is produced through the use of various body techniques and technologies. The concept of audile technique, theorized by Jonathan Sterne in *The Audible Past* derives from Marcel Mauss’s concept “techniques of the body,” that is, the various ways in which the body, “man’s first and most natural technical object,” is assembled and adapted from its performance of actions (Mauss quoted in Sterne, 2003, p.91). Sterne extends these techniques of the body to include sensory activities, such as listening, looking, tasting, smelling, touching; something that he suggests is already implied by Mauss. These actions become tools for investigating, knowing, and interacting with the surrounding world: they are not just cognitive or mental; rather they involve and are shaped by bodily training (Kane, 2015, p.8). Sterne and other theorists of auditory culture such as Kane, offer an account of the history of acousmatic listening as a cultural practice. Indeed, the attempt to describe the act of hearing outside of history “strives for a false transcendence. Even phenomenologies can change” (Sterne, 2003). Kane considers acousmatic listening as “a node in a network of cultural practices,” (2014, p.224), meaning that cultural and institutional programmes are involved in producing and maintaining this mode of listening. He goes on to explain that the acousmatic listener is not isolating the ear to achieve an idealized essence of listening; rather he or she continuously attempts to garner the

²⁴ Jean-Francois Augoyard and Henri Torgue in *Sonic Experience: A Guide to Everyday Sounds* (2006) describe the empirical detail of sound as effect.

knowledge already possessed from experience and other senses to distinguish his or her auditory experience (ibid).

Analogous to sound's ability to become its own thing after it leaves its original source, is the widely recognized affective quality of sound to shape the sonic experience. This is what Murray Schafer calls "touch at a distance" in order to capture its corporeality. Touch at a distance is the capacity of sound to affect listeners in intimate and meaningful ways, which can also have a spatio-temporal reach. This capacity lies in the physicality of sound's vibratory effect upon the body; and in Schafer's words, this is the point of intersection between sound and touch: "Touch is the most personal of the senses. Hearing and touch meet where the lower frequencies of audible sound pass over to tactile vibrations (at about 20 hertz). Hearing is a way of touching at a distance and the intimacy of the first sense is fused with sociability whenever people gather together to hear something special" (Schafer, 1977, p.11). Here, Tim Ingold's phrase that sound is not the object of perception but what we "hear in" (2007a), also captures this "touching" quality of sound, which serves as a starting point for the accounts of embodied and affective sound. In the meantime, Truax distinguishes between "listening-in-readiness," where the listener is receptive to listening to certain sounds while their attention lies elsewhere (such as a mother woken up by a baby's quiet murmurings, but not by road traffic), and "listening-in-search," where the listening subject is in a conscious search for sound "cues" (1984, p.19). According to Voegelin, the listener becomes producer as a result of the acousmatic listening; and she invents her own contingent reality between what is heard and the time-space of its perception, since the invisibility of the sound source enables a multiplicity of perception (2010, p.38).

The intersection of touch and sound, however, is more intense and thorough than that of a simply physical bodily encounter. This is outlined by Hendy, when he talks about the power of certain sounds to influence us (2013, p.xiv), enabling certain institutions such as nation states, organised religions or commercial companies, to shape soundscapes socially, culturally and experientially. Sound, as well as silence, can resonate in consciousness and in memory, instructing thought processes and inducing emotions, whilst directing consciousness in the realm of imagination, in what Ihde calls the "auditory imagination" (Ihde, 2007). The touch of sound, as a form

of inner speech, thinking language, or as an active imaginative mode of experience of resonating embodied sound, can also mediate and compose relationships between self and world. The attribute of touch at a distance, established in the inherent physicality of sound as vibratory matter, resonating in memory and imagination, enlivens opportunities for political action for Revill (2016, p.12). Touch at a distance associates sound with intimate and embodied processes of perception and cognition, enabling the making and remaking of the self and other, in contrast with acousmatic properties of sound that according to Revill create a spatio-temporal separation, thus othering sound by disjoining senses of causality and making (ibid).

In sound studies, listening has been broadly associated with humans, in that such phenomenological listening experiences are “addressing subjective responses to sound objects, which provide the sound object with a certain quality dependent on the imaginative response of the listener” (Lacey, 2014, pp.2–3). Inputs from the field of geography are contesting this approach of listening as an act that is restricted to human consciousness and intentionality, positing that they fail to address the full possibilities of listening extending beyond the human to engage with other forms of life (Gallagher et al., 2017). Turning to geography, a discipline concerned with the earth as a whole, Gallagher et al offer an expanded understanding of listening, informed by an affective sonic materialism that takes into consideration the receptivity of both bodies and materials when confronted with sound.²⁵ This approach does not deny the important role of human consciousness, it rather extends the audile techniques of the body, and the acousmatic approach, to overcome the tendency to think that listening is an activity restricted to associations with just human consciousness.

In many ways, this is a configuration that understands bodies as both human and more-than-human entities, while considering materials to include “everything from microscopic particles to large-scale landforms” (ibid, p.621). This capacity of non-

²⁵ Sonic materialism (Cox, 2011) calls for a consideration of sound beyond its attributed phenomenological immediacy, individuality and symbolism; allowing for an expanded perspective of listening. However, Thompson argues that the nature/culture ramification of Cox’s sonic ontology underlines his dualism of music (which stands in for signification, culture, meaning, discourse) and sound art (which stands in for ontology, materiality, sound-itself, flux) (Thompson, 2017b, p.272).

human bodies to act as agents/actants, is what Jane Bennet (2010) described as vibrant materiality in a move away from anthropocentrism.²⁶ Vibrant materialism underlines how sound moves through these bodies and materials, and also how these bodies and materials are moved by sound; and in doing so, it radically expands listening from the ear, to the whole body. This augmented listening also upholds sounds that cannot be heard by human ears (whether due to frequency range, volume, temporality, or spatiality), amplifying all important aspects of sound, such as its relations with materials that accommodate sound's multiplicity. This enrichment of sonic responsiveness, going beyond active human audition, formulates a listening that is more encompassing, instructed outwards from the human, and considers ways in which animals react to sound, or how devices or buildings respond to certain kinds of sonic vibration (Gallagher et al., 2017, p.622).²⁷

This expansion of listening practices has been mobilized to address the various registers of sound: its aesthetic, compositional and timbral qualities; its affective, material and embodied characteristics; the ways in which sound is both spatial and temporal, evoking a sense of time, distance, direction or movement; sound's capacity to produce knowledge of events and processes; and the semiotic associations produced by listening, including the tendency of sound to trigger memories (Gallagher et al., 2017). This approach to the qualities of listening is a matter for a critical or post-phenomenological consideration which "takes into its analysis the instrumental, as well as mediational relations with instruments" (Ihde, 2016, p.206). In the expanded listening style, technologies and materiality are considered as taken into embodied intentionality itself (p.210) and the phenomenological study of sound is recast as a critical (Revill, 2016), post- (Ihde, 2009), or cultural (Born, 2013) phenomenology, concerned with the production of meaningful and specific spatio-

²⁶ Bennett does not negate the role of the human. She distinguishes between people-materialities and thing-materialities. She explains that human individuals themselves are composed of vital materials, whose power is thing-power. Bennett argues that we don't need to place human at the ontological centre of hierarchical apex; instead, she employs "anthropomorphism," the idea that human agency has some echoes in nonhuman nature to counter the narcissism of humans in charge of the world. Her vital materialism attempts a more radical displacement of the human subject.

²⁷ This informed take on expanded listening that Gallagher et al propose, draws from post-humanist and multispecies propositions asserting that we need to forgo responses to sound that privilege the human over other kinds of bodies and materials (2017, p.622).

temporal experiences. Developing listening practices for listening to sound(ing) arts may therefore be less about inspiring a novel response to becoming newly responsive to sound; rather it is more about the active, situated, and mediated conceptions of the act of listening, which are already affective, but normally pass unnoticed. Put another way, it is about the politics animated and articulated by listening.

2.2.2 | Listening to sound(ing) art: subject-object relation

Going back to the initial question of this chapter - what is it to listen to sound art and how we conceive of listening to sound art - it makes sense to look for clues in musical listening and in the anthropology and sociology of music. There, Born skilfully locates musical listening within the auditory culture of an era, society or culture (2010b). In order to frame the listening activity, we need to outline its boundaries and look for where it takes place: “within the mind, or (also) within the body? Is it primarily individual, or is it socialized and encultured?” (p.80). To address those questions, Born argues about the need for a de-idealized listening that forgoes the reductive binarisms of the (active) listening / (passive) hearing divisions.²⁸ This focusing on listening “as a changing relation or mediation between subjects and objects” (p.81), takes into consideration the mediated nature and materiality of all musical experience. Born’s cultural-historical approach to sound requires different forms of listening practices associated with contemporary media. Indeed, the mediation of mobile audio devices entails a schizophonic, acousmatic experience, in Schaferian terms, in order to describe the acoustic experience. For Schafer, listening is intended as acoustic design rather than the experiential.²⁹

Contra Schafer, when experiencing a soundwalk or a soundmap, we listen differently. Our experience of sound, our disposition toward the act of listening, and our semantic and affective engagement with sound, are mediated by social and cultural location and identities (p.85), as well as mobile audio technologies. Technological mediations, such

²⁸ According to Born (2010b), listening is intentional and concentrated, entailing understanding and “co-creation”, while hearing is a passive and inadvertent, disengaged and unconcentrated activity.

²⁹ Born (2010c) draws from Bourdieu's theory of cultural production consumption and taste, in order to broaden the sociology of art subdiscipline, by shifting the interest from “art” towards “cultural production”.

as sound recording technologies, electronic and digital mobile music media, brought a transformation to our listening practices, which enabled new ways of consumption of sonic experience. This ubiquitous listening, engendered by sound-reproduction technologies, proposed entirely new kinds of aesthetic experience that correlated auditory with kinaesthetic experience, in what Born described as “an aesthetic of the simultaneous [...] – music *and* movement *and* place” (p.86, italics in text).³⁰ Soundwalks and soundmaps manifest this simultaneous aesthetic in a very simple and direct way; by asking people to navigate a space through a sonic sensibility, augmented by sound recording and locative media technologies. These means for creating a work of sound(ing) art, suggest a listening experience that “results from and engenders mediation” (p.87).³¹ This mediated way of listening produces different social relations, in which the listener feels and finds themselves transformed, entangled in a “musical assemblage,” which comes to the fore through the use of these technologies. In this sense, the soundwalk or soundmap is understood as a sort of musical assemblage in itself; as “a series or network of relations between musical sounds, human and other subjects, practices, performances, cosmologies, discourses and representations, technologies, spaces and social relations” (p.88).

An insightful approach to listening (musical or sound art), calls for a shift from listening to experiencing, which interrogates “the encultured, affective, corporeal and located nature of musical experience which is listening” (Born, 2010b, p.80). This idea of “listening-as-musical-experience” (ibid) has been introduced in Steven Feld’s seminal anthropological study of the Kaluli people of the Bosavi rainforests of Papua New Guinea. Feld proposed a critical anthropology of music “intended to overcome the music/social dualism by analysing “sound structure as socially structured,” that is, musical cultures as immanently social” (Born, 2010a, p.220). Deploying situated relational analysis and empirical research, Steven Feld’s account of the poetics and aesthetics of the musical forms of the Kaluli songs, and analyses Kaluli aesthetics within the frame of their social ecology and ontology, which consists of their social

³⁰ The aesthetic of ubiquitous listening is captured by Michael Bull’s work on the Walkman and iPod (Bull, 2000; 2007).

³¹ Mediations are the ways in which sound exists within, and is communicated to, the world (Born, 2005; 2010b).

ideal of cooperative and collaborative autonomy, and is embedded in their cosmology (Born, 2010c, p.15). What is evident in Feld's analysis is that in Kaluli world structure, performance, aesthetics, and collective emotion are always imbricated and intertwined in a dynamic totality. The acts of composing, improvising, performing, and receiving, traverse the smooth space of Kaluli aesthetics and poetics, where host listeners and guest performers engage in musical acts of creative collaboration and co-creation, enabling a more pliable division of artistic labour. Indeed, there is no separation "of listening from participation, mind from body, appreciation of form from its effect and its expression" (Born, 2010b, p.83) in Kaluli musical life, a difference which according to Born problematizes western art musical cultures.

When listening/contributing to soundwalks or soundmaps, the embodied nature of the experience calls for whole body participation, which is an affective as well as intellectual exercise. Soundwalking/soundmapping as a participatory and collaborative endeavour, also blurs the lines between composition, improvisation, performance, and reception. While participation and interaction prevail as key strategies within non-Western musical practices, for LaBelle (2012) the sound arts fundamentally presuppose such strategies. In other words, participation and interaction are already engraved within the sound arts (ibid), supporting associations and relational exchanges between body and object, self and other, here and there. The experience of sound(ing) art requires a type of a de-idealized listening, as described above, which according to Voegelin presupposes the invention of sound; we are invited to listen *in*, rather than listen *to* the sounds (2010, p.xiv). In an attempt to dissociate sound art from music, which resonates with Born's cultural-historical approach, Voegelin (2010) argues that music requires a mode of listening that seeks out the known, the foreseen, the already determined; whereas sound art seeks out the unknown and unforeseen. Therefore, listening to sound art entails an ongoing act of constituting knowledge, where sound itself is the source, or the "wealth" of said knowledge (Voegelin, 2010, p.35).

Voegelin describes an impulse to subsume sound art into the visual domain, rather than sounds heard (2010, p.xi). She proposes a philosophy of sound art that, at its core has the principle of sharing time and space with the object or event under consideration. Her conception of listening as an actual practice and as a conceptual

sensibility, aims to unsettle the perceived certainty of visual aesthetic, by suggesting a sonic sensibility that “illuminates the unseen aspects of visuality, augmenting rather than opposing a visual philosophy” (p.xiii). Her philosophy is one of listening. Similarly, LaBelle (2012) hears a mobilization of listening as a way to confound the separation produced by the viewer/viewed dyad within the visual arts in the work of many experimental musicians and sound artists. A listening practice for sound art provides new ways for understanding or describing a situation or interaction, and can be described as a sonic sensibility, which re-focuses philosophical problems around subjectivity and objectivity, and connects the experience of sound with the notion of virtuality and possible worlds (Voegelin, 2010, p.xiii). This according to Voegelin is a philosophy that experiences; a sound art philosophy that is employed as “a strategy of listening rather than an instruction to hear” (p.xiv) to articulate “the fragile relationship between experience and communication” (p.xv). Listening in this sense becomes an act of engaging with the world, rather than a physiological fact (p.3).

Sonic sensibility promotes an emotional and personal engagement with listening, which becomes useful for engaging with other arts and in relation to the broader concerns of a socio-aesthetic consciousness and ethics. Voegelin (2010) recognizes the a priori influence of the senses, which are always ideologically and aesthetically determined, but suggests that we work towards listening in spite, rather than because, of this influence; and invites us to suspend ideas of genre, category, purpose and art historical context, in order to achieve a hearing that deals with the material heard, now, contingently and individually. For Voegelin this suspension means appreciating the artistic context and intention through the practice of listening, rather than as a description and limitation of hearing. The approach to listening that Voegelin suggests is thus philosophical, following Adorno’s call for philosophical interpretations.³² However, as Born also asserts, Adorno’s account of listening is limited, as it falls back on his commitment to the historicity of critical theory in relation to the empirical socio-historical research: Adorno resorts to “a normative

³² In order to answer questions, according to Adorno, we need to rearrange the elements of the question, rather than extend beyond those elements, as this might cause the disappearance of the question. See “The Actuality of Philosophy” in *The Adorno Reader*, edited by Brian O’Connor, Oxford: Blackwell, 2000, p.37.

account of structural listening” (Born, 2010b, p.80) drawing from a description of negative ideal listening types, that promote idealized discussions of listening as active/passive.³³ Voegelin (2010) though claims that this engaged listening is perception as interpretation; to hear the work or the sound is to invent it in listening rather than to recognize its contemporary and historical context. An exact and relevant listening will produce a sound art work’s artistic context as innovative perception, rather than through the expectation of an *a priori* reality; resisting homogenised interpretations of meaning and producing an individual knowledge.

Knowing then becomes the experience of sound as a temporal relationship. This relationship is not between things but is the thing, is sound itself and the sound art work is generated in the listening practice. The aesthetic subject in sound is defined by interaction with the auditory world and the listener is entwined with the heard. The understanding gained is a knowing of the moment as a sensory event, involving the listener and the sound in a reciprocal inventive production. This conception challenges both notions of objectivity and subjectivity and reconsiders the possibility of place and meaning (Voegelin, 2010, p.5). The themes then of subjectivity, objectivity, communication, collective relations, meaning and sense making, become central in Voegelin’s philosophy of sound art (2010, p.6); yet her contribution is not the distinction between music and sound art, but a new understanding of how we can listen to both of them. She suggests following the same approach to musical works, and to attempt to listen to them for the sound they make rather than their musical organisation (p.8). Kane (2012) also notes that “insofar as one can listen to music in a “suspended” way, listening to it as the sounds themselves,” then music becomes sound art. Engaging with the work in this way, she argues, contrasts the split between active/passive listening.

Through listening to sound art works and the everyday acoustic environment, Voegelin brings to light the consequences of a sonic perception and subjectivity as a philosophical experience: “Sound does not describe but produces the object/phenomenon under consideration [...] It does not deny visual reality but

³³ The culture consumer, emotional listener, resentment listener, jazz expert, entertainment listener and so on (Born, 2010b).

augments the seen through the heard (2010, p.10) Listening as an aesthetic practice challenges how we see and how we participate in the production of the visual world” (p.12). This is then a contribution to the phenomenological aesthetics of listening, where listening acts as the way to engage with the world perceptually rather than a tool to decode it. The listener is always in a position of uncertainty, always in the midst of constituting the object/phenomenon heard, as well as constituting themselves (Kane, 2012). As such, Voegelin’s claim that “the listener becomes producer” (2010, p.38) in fact produces her ontology of sound. This dematerialized ontology of sound (Kane, 2012) is related to the capacity of the listener to produce their meaning, and results to a detachment of listening from the object heard. This is a theorisation of sound art as an art of sounds that produces sound art works at the level where individual sounds matter.

Voegelin (2010) suggests the listener to suspend, as much as possible, ideas of genre, category, purpose and art historical context in order to achieve a mode of listening that focuses on the perception of the material heard. This, according to Kane (2012), should not to be mistaken with the whole materiality of sound, but rather with the materiality of perception. Yet, sound art works are cultural products too, and as such, a diachronic analysis is required, as Born conforms (2010c); attuned to historical specificity and an account of agency as creative invention, are of critical importance (2010c, p.10). Such analysis requires studying the art object as a social process, employing an empiricist approach that investigates the practices, technologies, conventions and divisions of labour, which are demanded for the making of art in relation to its social, economic, political and technological conditions. Moving away from the chasm between subject-object and object-context, this approach focuses on the assemblage of material, social and temporal mediations, which form the concept of the cultural object. Cultural objects that result from creative agency epitomize and mediate the social relations resulting from their production, by waving connectedness across space and time (Born, 2010c, p.13). Through their circulation, social relations are distributed spatially and temporally, transforming themselves and the objects; thus, resulting in changes not only in the interpretation and performance and reception, but also in the physical form of the objects. Indeed, this analytical ontology focuses on the relational nature between subject and object.

Listening to a soundmap or experiencing a soundwalk, allows us to discover and generate the heard. Listening is not a receptive mode but a method of exploration, a mode of 'walking' through the soundscape/the sound work. This discovering mode drives Voegelin's aesthetic and philosophy of sound art, which can also be productive when encountering sound(ing) art works in public space. Soundwalks create hybrid spaces that act as interpretations of physical space with acoustic terms. The imaginary or the imagined, through phantasy is located within this hybrid space. The relationship between the technologically mediated, as a result of a technological enchantment and unmediated experience, shapes this hybrid space. Soundwalks are experiences mediated through technology (devices, headphones, etc) and movement (body, space). The rhythm of the sonic composition defines the rhythm of walking. The sonic composition can be porous, in the sense that it is more open to the natural soundscape, either incorporating it in the composition or allowing it to be heard through open headphones, creating a personal audio remix. Sonic compositions that take space, context and routes into consideration, ultimately question how space is connected to stories that exist within it, how it interacts and how it is somatically perceived.

Simultaneously, there are more processes in place during a listening session that go beyond meaning making, decoding and memory; also contributing to the creation and development of a sense of place. These include situated modes of listening, and sonic ways of knowing, sensing, animating, and sounding place, in what has been outlined as acoustemology. Indeed, via listening to sound(ing) arts, we can answer questions such as how does a place exist? Or what its importance is and how it is being exploited; as well as questioning what happens when (sound) art goes out to the public space. The second part of this chapter thus draws from a phenomenological tradition of space that foregrounds "the lively quality of embodied placiality" (Casey, 1997, p.288). This is coupled with relational traditions of space, seen as a relational, active and connective field of forces that is inherently regional, so as to address sound(ing)

art works as producing local knowledge, which can lead to a rethinking both of locality and knowledge.³⁴

2.3 | Place acoustemology

Physical objects materialize the relationship between humans and their relationship with the physical space. The involution of thoughts, emotions and senses together with physical objects, re-locates humans' relationship with the world. At the same time, the materiality of cultural objects with reference to their obdurate "thing-ness," and to their varying ontological status, informs the ways in which we construe "our sense of ourselves as subjects ... how the things that people make, make people" (Miller, 2005, cited in Born, 2010. p.18). The anthropologist Richardson adopts a phenomenological approach that draws on Heidegger and theorists from the school of Symbolic Interactionism.³⁵ According to his view, "the human world, because it is brought about by a trafficking in symbols, is not mainly in our individual heads [...] It is an intersubjective world, lying out there, between the "you-ness" of you and the "me-ness" of me. Material culture epitomizes this attribute of human life" (Richardson, 1982, p.422). What Richardson suggests is that humans' relationship with the world is mediated by material culture, i.e. the artefacts through which humans form relations with each other and establish a relationship with the world. Through material culture expressed in physical substance, according to Richardson, and through the ways we use physical objects and through the meanings we attribute to them within our intersubjective interaction,³⁶ we cease "simply being there in our own physicality" and we start "being-in-the-world" (ibid).³⁷

³⁴ Another tradition of space is the Newtonian, or absolutist, which theorises space as a measurable and inert extension.

³⁵ This theory is the process of interaction in the formation of meanings for individuals. Herbert Blumer came up with three basic principles for his theory: meaning, language, and thought. These three principles lead to conclusions about the creation of a person's self and socialization into a larger community. See Blumer, Herbert (1969). *Symbolic Interactionism: Perspective and Method*. New Jersey, Prentice-Hall.

³⁶ The process of several, or many people, coming to know a common phenomenon, each through his or her subjective experience.

³⁷ Acting with awareness, responsibility, and freedom within a context of given world-conditions. We and our activities are always 'in the world', our being is being-in-the-world.

This new way of being-in-the-world, in the phenomenological sense of the term, promotes new ways of correlation and new forms of relationships. Distinctions between subjective and objective aspects of reality are shaped by the attitude that a social actor takes toward the world, as well as by the historical and cultural conditions that inform the values, assumptions, ideals, and norms embedded within it. One of the main aims of anthropologists drawing from phenomenological methods has been to bracket the assumptions that come from their own cultural and theoretical heritages, in trying to understand more accurately and more fully a diverse number of cultural and experiential phenomena - space and place (Basso & Feld, 1996). An anthropology of place then examines the sense of what it means to be here rather than there; now rather than then.

Several fruitful insights can be derived again from Steven Feld's work, whose account of the poetics and aesthetics of the musical forms of the Kaluli songs, centres on the embeddedness of Kaluli aesthetics and is inseparable from their cosmology. These insights have been recently enunciated in Georgina Born's seminal study on the relations between music, sound, and space (2013). First, is the significance of a sonic-social phenomenology, one that is generalizable as both epistemology and method. Secondly, the interrelation between, and mutual modulation of, space and time that lies at the core of our embodied experience of sound and music. Thirdly, these modes of experience - sound, music, their spatialities and temporalities - portrayed as immanently affective and as generative of subjective impression, expression and transformation. And fourthly, the significance of the mutuality of these modes of experience, and of the sounded overlaying of bodies and environment. This mutuality also indicates a theory of mediation of sound and music: of their complex and multiple, sensory and affective, material and social forms (Born, 2013, pp.8-9).

2.3.1 | Sensing place

Feld has developed the idea of acoustemology to address the question of how place is sensed. He delved into the local conditions of acoustic sensation, knowledge and imagination, embodied in the culturally particular sense of place resounding in Bosavi (Feld, 1996, p.91). The creativity of imagination acts as a way to know, experience, enact, and embody subject- subject relations (Feld, 2015, p.19) by re-situating

knowledge inside an ecological network of practices which include places, relations, affects, and bodies (Timeto, 2015, p.153). Imaginative creativity can be found in the relation between imagination and knowledge, based on performativity and imagination. Feld (1996) distinguishes between the acoustic space, where the cultural implications of a directionally simultaneous and diffused “ear point,” provide an alternative to viewpoint, and the auditory space, which describes the ways in which space is audibly fused with time in the progression and motion of tones.

This potential of acoustic knowing, of sounding as a condition of and for knowing, of sonic presence and awareness as potent, is thus shaping the forces of how people make sense of experiences. Knowing place as sensation is the result of a complex interplay between the auditory, the visual, and other inter-sensory perceptual processes. According to Feld: “[p]erceiving bodies are knowing bodies, and inseparable from what they know is culture as it imbues and shapes particular places. It is by bodies that places become cultural entities” (1996, p.134). The product is then a sensory ethnography as an everyday practice performed by a “sonic persona” that constitutes “a situated and idiosyncratic anthropology of the senses”(Schulze, 2018, p.113). The sonic persona is formed within a specific culture, era, and sonic environment, and may comprise of “groups of people, of apparatuses and machines, even of organizations and institutions” (p. 123). “A sonic persona is made out of a sensory corpus” (2018, p.157), or the listening body according to Schulze; thus all possible sensory and sonic forms of knowledge can provide options to acquire knowledge.

This exploration of sonic sensibilities, the ways in which sound is central to making sense, to knowing, to experiential truth, is also producing a sensuality of emplacement, of making place. As place is sensed, senses are placed (Feld, 1996, p.91) and sensations become experienced presences of the embodied mind. As cultural products, emotions are reproduced in individuals in the form of embodied experience. Sound, listening, and voice mark a special bodily network for sensation and emotion, because of their coordination of brain, nervous system, head, ear, chest, muscles, respiration, and breathing. Feld has described this nexus as “the kinesthesia and sonesthesia of shaped place encountered and learned by the moving, sensing, experiencing body” (p.105). Kinesthetic-sonesthetic bodily bases of knowledge

produce a sonic epistemology of emplacement, which implies the intertwined nature of sensual bodily presence and perceptual engagement. Hearing and voicing link the felt sensation of sound and balance to physical and emotional presence. Social phenomenology and hermeneutics of senses of place rely on the acoustic experience to manifest expressions of place. Places are sonically announced, and the experience of place can always be grounded in an acoustic dimension.

Places come into presence through the experience of bodily sensation and are evoked through poetic means; but it is through expression that they reach heightened emotional and aesthetic dimensions of sensual inspiration. Places are as potentially reverberant as they are reflective; “one’s embodied experiences and memories of them may draw significantly on the interplay of that resoundingness and reflectiveness” (Feld, 1996, p.97). This relation of sensation to emplacement affords experiential and expressive ways for places to be known, imagined, lived, and struggled over. Through a cultural process that is dynamic, multi-sensual and oscillating between the ‘foreground’ of everyday lived emplacement and a ‘background’ of social potential, places are rendered meaningful and are actively sensed. Forms of local knowledge and localized forms of expression – in other words, the spatial action of cognition – animate different modes of imagining and enacting place; of being emplaced and displaced. This relationship between embodiment and emplacement, the knowing of ‘local knowledge’ is reflected in the fact that human perception of spaces is culturally loaded (Coyne, 2009).

2.3.2 | Listening perceptions of place

Places are enlivened through what Basso calls “interanimation” (1996).³⁸ As places animate the ideas and feelings of persons who pay attention to them, these same ideas and feelings animate the places on which attention has been bestowed. For Casey (1996), place is the most fundamental form of embodied experience; it is the site of a powerful fusion of self, space, and time. The role of perception is therefore fundamental in determining how places are related to space. Sensations, sense data,

³⁸ Interanimation according to Basso (1996) describes the inseparability of the lives various people live and the settings in which they live them.

impressions, and all sorts of sensory inputs are the occasions of perception. Casey's phenomenological co-implication between place and the embodied self, affirms the importance of both primary perception and local knowledge: what it is about being in place. There is no knowing or sensing a place except by being in that place and to be in a place is to be in a position to perceive it: "[t]o live is to live locally, and to know is first of all to know the places one is in" (p. 18). Knowledge of place is subsequently an ingredient of perception. Local knowledge is experiential in the manner of *erlebnis* (lived experience) rather than *erfahrung* (abstract/analytical knowledge).

Perception is synesthetic – an affair of the whole-body sensing and moving. Bodily perceiving is directed at things and places and their meaning. As Casey (1996) notes, perception is not a matter of receptivity, rather a kind of passivity in activity.³⁹ Perception is also constituted by cultural and social structures, affected by cultural practices and social institutions. Knowledge of place is embodied and encultured. Cultural practices and institutions pervade every level of perception. Primacy of perception does not entail the priority of perception, as if it is separated from culture or society. Primacy of perception is about the lived body as a creature of cultural and social processes. Perception is also constitutive; and this is evident in the ways we perceive places. The influence is as equally meaningful as it is sensuous. So, to get from space to place, Casey suggests that the route runs via our own lived body. By assigning this importance of bodily structure for emplacement, what he calls "corporeal intentionality" (1996), the lived body integrates itself with its immediate environment, binding body and place in a common complex of relations.

Body then functions as field of localization, where crucial interactions are happening between body, place, and motion. Part of the power of place is its "e-motive" (Casey, 1996). Casey recognizes three kinds of bodily motion pertinent to place. The first case is staying in place: even when staying in place the body changes the positions of some of its parts, however modestly. The second is moving within a place: that is when one is moving within a defined area. Third, is moving between places: when bodies travel between different places; with the motion being a genuine transition (such as

³⁹ Receptivity is a property of the human mind, which is, so to speak, "receptive" to the objects insofar as the objects interact with the mind to produce presentations of the objects (Receptivity, 2018).

emigrations, pilgrimages, voyages of exchange, and nomadic circulations). Living-moving body is then essential to the process of emplacement: “*lived bodies belong to places* and help to constitute them” (Casey, 1996, p.24, italics in text). Even if bodies are displaced in certain respects, they are never placeless. In the same sense, places belong to lived bodies. Even imaginary places bring with them virtual bodies.

According to Casey, places gather experiences, histories, languages and thoughts, the familiar and the strange; this is their power of gathering, as in holding *together*. This allows for certain things, such as people, ideas, etc. to overlap or come forward together. This holding is both “a holding *in* and a holding *out*”; retaining its occupants within its boundaries. Places can hold memories and release them in our presence, which belong as much to place as to our brain and body. A place is more an event than a thing; as an event it has a unique idioloal dimension. Rather than being one definite sort of thing - physical, spiritual, cultural, or social - a given place takes on the qualities of its occupants; *places happen* (Casey, 1996, pp.24–25). The universality of place is at once concrete, relational, lateral and regional. To be cultural, to have a culture, is to inhabit a place sufficiently and intensely in order to cultivate it; this is what the emplacement of cultural practices entails, affording all sorts of possibilities for combining sounds and places.

2.4 | Knowing place through sound and walking

Perceptions of place can incite awareness of space and vice versa. In *Spatial Ecologies*, Verena Conley notes that the spatial turn advances epistemological concerns before ontological ones, in relation to space and place: “[p]lace is simply there, while space is produced or invented” (2012, p.2). Whether or not one makes such distinctions, it is important to indicate the emphasis on the role of time in spatial configuration. From within the field of geography, Doreen Massey (1993) argues for a reconceptualization of place, which moves away from what she sees as problematic ideas of boundedness, introverted history, and essentialized identities (p.64). Massey argues for the value of recognizing that places are processes integrating time and space, that they do not have simple boundaries, and that they are full of differences and conflicts rather than manifesting an unchanging identity. At the same time, she contends that none of this denies the importance of the specificity of places. Rather, it acknowledges that the

specificity of place “is constructed out of a particular constellation of relations, articulated together at a particular locus” (pp.66-67). This sense of place recognizes that the specificity of place is continually reproduced, but never settled or based on an internalized history, emphasizing both the durational aspect of places and their connections to the wider world. Place and mobility as concepts are dependent on each other and intimately intertwined (ibid).

Rather than seeing space as abstract and place as grounded and lived, Massey (2005) posits space as the product of interrelations, as constituting a multiplicity of trajectories, and as always under construction (p.9). Taking space and place together, Massey says: “If space is rather a simultaneity of stories-so-far, then places are collections of those stories, articulations within the wider power-geometries of space (p.130). In this way, space and place do not so much denote contrasting imaginations of geography as they do a continuum, wherein places exist within a space that is not abstract but is as concrete and lived as place is (p.185). The “throwntogetherness” or “coming together of trajectories” (pp.140-141) that constitute places, cannot be addressed without also thinking about space: “Instead of thinking of places as areas with boundaries around, they can be imagined as articulated moments in networks of social relations and understandings. And this in turn allows a sense of place which is extra-verted, which includes a consciousness of its links with the wider world, which integrates in a positive way the global and the local” (Massey, 1993, p.66).

To be located, culture also must be embodied. The customary body – the body that has incorporated cultural patterns into its basic actions – depends on these actions by habitus.⁴⁰ And as a creature of habitus, the same body necessarily inhabits places that are themselves culturally informed. The lived body is perceptive to cultural specificities of place and the perceptual particularities of the same place. Such a body is at once encultured and emplaced and enculturating and emplacing. As places gather bodies in deeply encultured ways, so cultures conjoin bodies in concrete circumstances of emplacement (Casey, 1996, p.46). This phenomenological tradition of space, foregrounds the lively quality of “embodied placiality” (Casey, 1997, p.288).

⁴⁰ According to Bourdieu habitus is “history turned into nature” (Bourdieu, 1977, p.78).

2.4.1 | Hearing with our feet

In linking thought to movement, mobility and motion, there are accounts of continental philosophers such as Kant, who “actually thought on their feet” (Braidotti, 2011, p.10). The idea that walking can be a creative, art-like activity, the “Art of Walking” as Thoreau called it, enticed writers, poets, and philosophers, and was quickly recognized as a creative, reflexive, and sometimes disruptive, act, during the 19th and the 20th century. Romantic strollers avoided the crowd and were fascinated to observe it and mix with it only, however, to corroborate their unique individuality as aesthetes. We can find this romantic praise for walking in the peripatetic poetry of Wordsworth and Coleridge as well. For both these walkers, the practice of purposefully wandering randomly was an expression of the freedom to discover, the freedom to create oneself, the freedom to imagine beyond mundane life and beyond the metropolitan crowd's habits.

The figure of the *flâneur*, the emblematic archetype of modern urban experience, is particularly iconic, as it is represented in the writings of Baudelaire and Benjamin.⁴¹ Benjamin's (1999) modernist take of the *flâneur* is the primary tool for interpreting modern culture. He is the observer of the commodity-obsessed marketplace, who “feeds on the sensory data taking shape before his eyes” (Benjamin, 1999, p.880), and through his exploratory walks constructs a unique image of the city, through his experiences, memories and history. The *flâneur* stands on the threshold of the metropolis, as the middle class (p.10). According to Solnit, the *flâneur* is an ambiguous figure; a tourist as well as a detached observer, “both resistant to and seduced by the new commercial culture.” The only problem is that the *flâneur* does not exist, except as a “type,” an “ideal,” or a literary character (2002, p.200). Indeed, while the city may appear to the *flâneur* as a landscape, opening up to him to grasp it, in what Benjamin (1999) describes as “phantasmagoria,” it at the same time “closes around him as room” (p.417). *Flânerie* for Benjamin was a paradigmatic reflexive practice, which sought to make chance and contingency the tools for an illuminating archaeology of

⁴¹ *Flâneurs* theorization of the art of walking as a leisurely stroll, endowed the urban landscape with the mystery and seduction usually associated with faraway, exotic places. This reflects a domestic variation on the exotic (Orientalism & Occidentalism), according to Braidotti (2011, p.10).

urban modernity; a knowledge to be used collectively in the reclaiming of modernity's emancipatory potential.

Within this context, the influential writings of Baudelaire, Benjamin, and others, by locating the 'modern' with city life and the public, thus fail to describe women's experience of modernity (Wolff, 1985), who together with "a range of individuals and particular social groups are excluded from the widest spectrum of access to public spaces and arenas" (McDowell, 1999: 150). Here, the impossibility of extracting oneself from the environment experienced, is the reason why the figure of the flâneur is popularized in extensive debates on the issues of reflexivity and objectivity (McCartney & Paquette, 2012a). The flâneur of Baudelaire and Benjamin can only be male; he is the modern hero and his entitlement to visit and comment on public spaces is never questioned (ibid). He is free to move about the city, observing and being observed. At any moment he can disappear in the crowd and remain anonymous. It is therefore no accident that the 'public' person was clearly male, as in the title of Richard Sennett's book on modernity *The Fall of Public Man*. The flâneur is described as a "detective figure" (Solnit, 2002, p.200) who is observing the world around him in a detached way, and feminist scholars have debated whether there were, or could be, female flâneurs. Sennett is aware of the different experience of women in the modern city. He recognises that "the right to escape to public privacy was unequally enjoyed by the sexes" (1974, p.217): In 1831, when George Sand wanted to experience the public life of the streets of Paris, she had to dress as a boy to be allowed the freedom to stroll alone in the city, as she could not adopt the non-existent role of the "flâneuse" (Wolff, 1985, p.41).⁴²

If the walking practice of the flâneur was involuntary and immersive, the Dadaist practice goes beyond the purposeless walk of the flâneur; it is definitely described as mostly mundane and nonconformist (Breton & Witkovsky, 2003), with an aim to reject the institutional confinement of the arts (McCartney & Paquette, 2012a).⁴³ André Breton organised "visits-excursions" to selected spots throughout Paris, which

⁴² See more about women and public life and the invisibility of women in the literature of modernity in Wolff (1985).

⁴³ "Dada is boring only in relation to one's expectations of it." (Breton & Witkovsky, 2003, p.140).

extended the Dadaist critique of culture into the everyday streets of the city. During those visits, the walk becomes a metaphor, but also an act that could reveal the hidden zones of space; reframing the idea of the city beyond the accepted representation of the modern metropolis. For Breton, these walks served as a means for re-discovering traces of the Parisian history that were abandoned or hidden in the representation of the city as seen through the eyes of tourism and consumerism. The tours enabled people to discover the marvellous within the mundane, everyday space, what Benjamin calls “profane illumination” (Benjamin, 1978, p.49) and to find their personal meanings in the essentially meaningless reality of everyday life. By adopting an experimental, inquisitive attitude towards the nature of experiences themselves, walkers were able to overcome the sacred and moralistic kind found in religion, through a political and “materialistic, anthropological inspiration” (ibid). This critique of everyday life would become central to Surrealism.

We can find a strikingly similar approach taken up by the Situationist International, whose psychogeographical projects place the subject within the space of everyday life, but without a predefined intention or destination. Situationists aimed to present *flânerie* as a potentially collective practice in the fields of *dérive* and psychogeography. Psychogeography is the study of the effects of the urban environment on the psyche, which combines geography and psychology; while this method also asks the walker to seek a type of non-spectacular everydayness, exploring the hidden, emotional connections between spaces. Situationist theory further politicized walking through the practice of the *dérive* (drifting), “a technique of rapid passage through varied ambiances” (Debord, 1958), that enables a psychogeographic mapping of the city.⁴⁴

Dérives involve a collective “playful-constructive behaviour and awareness,” as Debord put it (p.50), quite different from the classical notion of the walk or stroll. As such, it promoted a new way of inhabiting the city, through experience and emotions, that was more inclusive. To refer back to the issue of female *flânerie*, the situationist approach has animated the soundwalk practice that features various prominent female figures, indicating a shift in the gender dynamics, at least for the specific genre

⁴⁴ *Dérive* was a form of walking that comes closest in English to drifting or wandering.

of sound art. This performative happening further emphasized the intimacy of the relationship between walkers and their surroundings through movement, emotion and engagement with the uniqueness of places. Walking, sensing, feeling, and getting lost in the city opened the way to alternative mappings of “an experience of space that was actually terrestrial, fragmented, subjective, temporal and cultural” (Sadler, 1998, p.52). Coming from a Marxist tradition with the intention of transforming capitalist society, Situationists were addressing the spectacles of consumerism and tourism, anticipating the late twentieth-century triumph of the spectacular-commodity society.

From a sociological perspective, Jean-François Augoyard wrote *Pas à Pas (Step by Step)* in 1979, a comprehensive study of the daily movements of urban walkers. There he created what he calls a “walking rhetoric” (Augoyard, 2007), a methodological and theoretical consideration of ways of walking in an urban environment, focusing on a specific location. Even though Augoyard conceives of walking in respect to space as the same as writing in respect to language, his walking rhetoric is clearly distinct from a linguistic process. Walking appears not just as a reflexive or practical activity; there is a playfulness inherent in walking that can reveal facets of the meaningfulness of place. Augoyard doesn’t consider walkers as flâneurs; rather they possess the agency to creatively shape their surroundings by deciding to take a detour, choose a different route, a simple stroll, or continue on the same path. The rhetorical nature that Augoyard ascribes to these contingent movements, stimulated the work of researchers at CRESSON, who compared the physical characteristics of urban settings with the perceptual awareness of their inhabitants and users. By focusing on the soundscape of urban life, they attempted to analyse the acoustic properties of all possible “sonic effects” and their effect on listeners. These sonic effects are descriptive tools that represent complex urban sonic situations and the correlation between sound perception and sound action, resulting from all components (physical, psychological, cultural) of the experience of urban spaces (Augoyard & Torgue, 2005).

This precise understanding of the everyday struggles of these walking figures, depicted in people’s actual walking practices within the built environment, appears in the work of Michel de Certeau (1984), whose critique of everyday life has provided us with a new way of dealing with the social experience of space. In his analysis of the

spatial practice, de Certeau describes writing as “an itinerant, progressive and regulated practice,” or as a “walk” (p. 134).⁴⁵ By comparing “pedestrian processes to linguistic formations,” (p. 103), he asserts the embodied mobility of walking along a path as writing, and on this path the walking figures “compose a manifold story that has neither author nor spectator, shaped out of fragments of trajectories and alterations of spaces” (p. 93). De Certeau bases his analysis of the concept of the city on the productive practice of walking; he draws our attention away from the grand narratives of spatial organization toward actual situated activities in every street, place and neighbourhood. He divides space into viewed space and experienced space (understood as process); he does not set space and place in explicit opposition, but links this to his concept of tactics and strategies: “[t]o walk is to lack place” (p. 103). Hence, his tactical acts of spatial resistance to the predominantly utilitarian sense of urban space, affords the possibility for meaning to be produced at a tactical level: bodies become meaningful through the spatial choices they make (Paquette & McCartney, 2012, p.138). Even the most banal walk contains “practices of self-differentiation or personal and collective resistance” (Stavrides, 2011).⁴⁶ Walkers actualize this ongoing mapping of space through their repetitive movements, which rhythmicize the experience of their surroundings.

This fundamental rhythmic presence lies at the core of Henry Lefebvre’s *Rhythmanalysis* (2004) wherein he explores the relation between the spaces that are generated by moving bodies and rhythm; pointing to the mutual co-construction of the spatial and the social.⁴⁷ *Rhythmanalysis* adopts the idea of rhythm as an interpretive and analytic tool for understanding practices of everyday life. Lefebvre

⁴⁵ Rebecca Solnit, taking up the same theme, argues that narrative writing is closely bound up with walking, precisely because just as with following footsteps, it allows one to read the words of someone - the author - who has gone before (2002).

⁴⁶ For de Certeau (1984), strategies belong to the sphere of institutions and power structures, while tactics are in the realm of every-day actions by ordinary people.

⁴⁷ With the exception of Lefebvre’s significant attempt to rethink rhythm in relation to space, scholarship has primarily linked rhythm to time. Ikoniadou (2014) argues that time has been subordinated to space and asks for the consideration of rhythm as “an undecided and undeterminable concept and method of inquiry” (p.149) that shapes our experience of time and event. Reading Susanne Langer’s explanation of music as a “semblance” pointing to “a vital experiential time” (Langer, 1953 quoted in Ikoniadou 2014, p.150), Ikoniadou argues that rhythm is misunderstood as “regular recurrence of events” (ibid), and proposes that digital sonic works of art that, consider rhythm as a synthesis of forces that can produce balanced and perceptible structures.

calls the rhythmanalyst to listen to a street in the way that one would listen to a symphony (p.87); and through the study of the multiple rhythms of the body and of the city, rhythms which usually go by unnoticed, interpret the city as lived and experienced. For the rhythmanalyst, whose works “return to and intervene in the everyday” (p.26), rhythmanalysis is a practice in which grasping a rhythm requires first that one is grasped by it (p.27). Lefebvre 's assertion that it is difference that distinguishes rhythm from mere repetition (p.78), enlivens Coyne's (2010) apprehension of repetition as relevant to Lefebvre's notion of rhythmanalysis. Coyne argues that as “an affirmation of habit, inhabitation, habitat, and home” (p.91), repetition and the rhythmic movement of bodies can be used as tools for spatial organization. These attempts to employ walking as a narrative technique to produce alternative readings, which multiply the meanings of the city as experienced, are undoubtedly useful to both its inhabitants, but also planners.

2.4.2 | Mapping the soundscape

Schafer offered the first definition of the term soundscape in a pamphlet called *The New Soundscape: A Handbook for the Modern Music Teacher* (1976). Schafer's broad definition of soundscape as “any aural area of study” (1977, p.7) allows us to consider the multiple and entangled relationships between listeners, sound, place, and meaning. Alluding to the notion of the landscape, a soundscape seems to offer a way of describing the relationship between sound and place (Kelman, 2010). Yet, the term soundscape denotes a more complete impression of the acoustic environment. The soundscape is made up of everything that can be heard in a particular place at a specific moment in time, i.e. a particular setting within which certain sounds shape the social construction of the place. But what is the relationship between sound and place, given that sound travels, yet place is always contingent and local?

A listening walk and mental map of an area are processes and practices through which places are rendered meaningful and are actively sensed. The landscape acquires the affluence of a cultural process, as dynamic, multi-sensual, “constantly oscillating between a ‘foreground’ of everyday lived emplacement and ‘background’ of social potential” (Hirsch & O'Hanlon, 1995: 67). These forms of local knowledge and localized forms of expression provide different modes of imagining and enacting

place. There is a relationship between embodiment and emplacement as result of sharing “local knowledge.” Feld has described this knowledge as *Senses of Place*, hinting at the idea of multiple perspectives, stating that we cannot talk about a sense of place as a single and static concept (Basso & Feld, 1996). This relation of sensation to emplacement is experiential; with primary perception (sensations, sense data, impressions, etc.) and being in place, contributing to the variety of ways in which places are known, imagined, lived, struggled over and related to.

Casey asserts the importance of bodily structure for emplacement, a form of “corporeal intentionality” that embeds bodies in place (1996). The lived body integrates itself with its immediate environment, binding body and place in a common complex of relations. The living-moving body as a field of localization is essential to the process of emplacement: lived bodies belong to places and help constitute them. Basic to local knowledge is knowledge of place by means of the body; such knowledge is “knowledge by acquaintance,” a local knowledge that leads us to rethink both locality and knowledge (ibid). Bodies not only perceive but know places through senses. The local conditions of acoustic sensation, knowledge, and imagination, embodied in the culturally particular sense of place, has been described by Feld as *acoustemology* (1996, p.91). Social phenomenology and hermeneutics of senses of place, implicate the intertwined nature of sensual bodily presence and of perceptual engagement; providing a fusion of space and time that joins lives and events as embodied memories. This creates the potential of acoustic knowing; of sound as a condition of and for knowing; of sonic presence and awareness as, potent shaping forces that inform how people make sense of experiences. And as the above-mentioned examples have shown, experience of place can be grounded in the acoustic dimension. Knowing place (as sensation) for Feld (1996), is the result of a complex interplay between the auditory, the visual, and other inter-sensory perceptual processes.

The development of field recordings and field recording technology has created a musical form that invites a reflective response to place through listening. Place and site have, through modern technology, developed from being a container of music to something that might be articulated through sound; thus, creating urban spaces in which sound is considered an essential part of placemaking. Works of mobile

sound(ing) art combine a focus on sound with an interest in the site-specific and the relation between the two, as well as with the individual in the social context. This movement toward soundwalks and soundmaps (also known as field recording or field phonography; subsequently mixing and broadcasting these sound walks and soundmaps) seems opposed to the original aims of Schafer. This practice, employed extensively by Westerkamp and many others, seems to contradict Schafer's emphasis on the soundscape's inextricable connection to place (Westerkamp, 1996, p.2). Westerkamp argues that listening to a soundscape composition does not disorient the listener, but rather "creates a clearer sense of place and belonging for both composer and listener" (ibid) through the artistic transmission of meanings about place. For Westerkamp, the immersive nature of a soundscape composition enhances a listener's understanding of place (Polli, 2012).

Gallagher (2015) argues that much of sound art and experimental music confronts Blesser and Salter's (2007) definition of listening as "active attention or reaction to the meaning, emotions and symbolism contained within sound" (p.5), with an alternative notion: "maybe sound doesn't have to mean anything. Maybe meaning is as much something we bring to sound, as something sound brings to us" (Gallagher, 2015b, p.42). If listening is about making rather than receiving meaning, then that process will always be compromised, messy, provisional and unfinished, taking place amidst a motley assemblage of sounding bodies, materials and spaces (ibid). Meaning is further described as "the territorializing force of human language and human knowledge upon the raw, inhuman fact of sound as a vibrational force" (Daniel, 2011, p.9). Within this context, field recordings generate a deeper awareness and knowledge of the world, and sometimes they offer a means by which to renew human connections with more-than-human life (Gallagher, 2015a, pp.560-561).

Field recording has had a great impact on sound(ing) art and plays an important role in the formation of acoustic communities; conveying the "rich" acoustic information that Truax describes as a prerequisite of the community (1984, p.58). As a set of cultural practices through which acoustic communities are engaging with spaces, places, and environments (Gallagher, 2015a), "[f]ield recordings are composed with, performed in concert venues, installed in galleries, released as CDs, worked into an audio-visual matrix with film and other media and made available in soundmaps and

other online forms of distribution” (Lane & Carlyle, 2013, p.11). Recorded outside of a studio environment, field recordings can represent a sense of place, action, and personal perspective. In that sense, field recordings are both representational and performative (Gallagher, 2015a); hybridising space through sound, performed by devices in the context of a mediated sound walk/map, co-contributing to the production of a hybrid space. An increasing number of sound(ing) art works are bringing field recordings into public spaces, both urban and rural. Sound artists that deploy field recordings in their practice use different sound editing and compositional tools to produce immersive effects to the listeners, but, as Gallagher (2015a, p.564) argues, field recordings may be experienced as boring, vacuous, alienating, or disconnecting. He adds that field recordings may also enact power within the wider global economy of art, digital media, and technology; or reproduce content that could be critiqued as orientalist, elitist, romanticising, voyeuristic, objectifying, or otherwise problematic (ibid).

Using locative technology to translocate projects, is a recent phenomenon that has only become feasible on a wide scale since the advent of GPS-enabled smartphones and global mapping interfaces such as Google Earth, which, according to Bradley (2016), results in five orders of sound displacements. The first order displacement, a development of acoustics, is physical: the perception of sound involves displacement of the sounding object. Any environmental listening experience entails this vibrational displacement.⁴⁸ The second order displacement is psychosocial: experiencing a sound piece involves choices on the part of the artist and listener. Third is intervention; where a person intervenes in the environment in some way, either through making sounds (live voice or instrument), architectural intervention, curating a soundwalk or a combination thereof. Fourth order displacement involves capture of sound, through recording sounds for subsequent use, or by setting up live sensors and/or microphones to relay sounds to another site.⁴⁹ The fifth order displacement is temporal. This level involves editing or manipulation of any kind,

⁴⁸ “Vibrational ontology” is a term used by Steve Goodman to describe sound’s way of being in the world (2012, p.71).

⁴⁹ Equipment choices are crucial to this level and have a direct bearing on the source sounds which become raw material to be worked on further in the next level/order.

beyond live streaming and simple capture/playback. Last, the sixth order displacement is fully mediated. This is where sounds are recycled either for new artworks (e.g. sampling culture), within the same piece (e.g. *I am Sitting in a Room* by Alvin Lucier), or for documentation of an event. Gallagher (2014) terms the use of audio media in researching places, “audio geography” and argues that, as well as representing places, audio geography can shape listeners’ attention and bodily movements. In particular, portable audio devices afford the possibility to fold the sounds of a place back into that same place. This “displacement-replacement” (p.2) afforded by mobile audio devices, thereby has the potential of reworking places, albeit temporarily.

Soundwalks and soundmaps employ field recordings and soundscapes as a way of understanding and connecting with a place. A narrative composed by field recordings draws from documentary and ethnographic processes and involves the ways places are inhabited by human and non-human subjects alike; it is a method of understanding life. Experimenting with field recordings as representational media, helps one to become aware of environmental sounds and of the listening process. This potential for contributing audio content is a key feature in sound(ing) art works that involve participants using various platforms available to contribute their sounds. These sounds act as a symbol of presence; of the soundscape, but also of people’s connection to the sounds of the particular place. Concurrently, experiencers of site-specific sound art works become sonic investigators of place; walking is a way to be present in a place and a tool to compose their experience. Soundwalks and soundmaps also make use of locative media: tagging, geo-annotation, storytelling (experiential mapping), wearables, gaming, and theatrical events. There is an immediate relation of the artwork to the place of production and consumption, developing aesthetics of location rooted in politics of situational engagement, entailing different dynamics of situatedness and mobility. Locative media sound works indicate a new conceptual framework within which to discuss different epistemological approaches to place, particularly in their mediations with information and communication technologies.

Walking sound art works offer an innovative research field that invites public engagement with mobile audio technology, facilitated by media convergence.⁵⁰ This tendency toward participation in art, reflects the rise in the social and cultural use of digital technologies. In resonance with this trend, soundwalks and soundmaps have evolved from a methodological tool for the qualitative study of places, to more recent artistic approaches to walking and listening (Paquette & McCartney 2012, p.135). Soundwalking is a mediated experience that takes place in urban space. Walking as a method of inquiry can be found in a wide range of disciplines: geography, anthropology, architecture, acoustic ecology, and art. The soundwalk as an emergent mobile sound art practice, strongly associated with portable and ubiquitous media devices, incorporates ideas of participation, interactivity and collaboration, by exploring sonic environments through movement. Experiencers of walking and mapping sound art works are engaged in co-operative actions that focus on their relationship with the surrounding environment, history and culture through the audio register.

The increasing mobile-locative aspects of contemporary media can highlight different ways of performing in locations; affirming that location and mobility have always been intertwined. These mediations give rise to the “extroverted” (Massey 1994, 155), “networked” (Ito 1999), and situational features of locations in formation; requiring that locations should be localized in order to be engaged with. It is a politics of location for locative media, which does not take their locative aspects for granted, but submits GPS systems to an *actual* positioning in which the practices and imaginaries are emerging. This means focusing on their material embeddedness in sociotechnical networks and their power to locate and dislocate that artists deploy to customise and associate sonic ideas to a specific geolocation. Mobile technologies such as the GPS smartphones, enable sound artists to apply locative audio and media technologies to creative thinking, while being able to take the results back to our streets and our own pockets of the city, as an extension and reinvention of the concert hall. Ultimately, by ‘augmenting the aurality’ of a specific every-day location, artists

⁵⁰ Media technology has given audiences the “tools to archive, annotate, appropriate and recirculate content” (Jenkins, 2006, p.18). Convergence culture is based on user-generated content and exists both within and outside commercial contexts; supporting as well as subverting corporate control. In convergence culture the audience becomes the user. See (Jenkins 2009; Hay & Couldry 2011).

can recover memories of a particular place, produce sonic alternatives to repositories of visual information and even attempt to forecast desired futures through sound.

In many ways, mapping place through sound is another mode of discovery within the context of social discourses. Soundmaps make an acoustic and an analytical extension of place, while soundwalks are graphic scores of places that everyone can play; an alternative way of mapping space in sound. This convergence of socio-cultural dialectics with mobile sound and place can capture human experience within a map. Ultimately, social theory and social research can draw on mobile locative sound arts, not only to develop better understandings of hybrid spaces and networked places as they emerge from contemporary practice, but also to transform social research itself, its modes of practice and forms of dissemination (Sheller 2011). Soundwalks and soundmaps may shed light on how cities are shaped and how social relationships are performed in a mobile context. Tracking field and cultural movement can assist in the identification of possible correlations between spatial performances and urban and social structures. The creative aspect of such sound art works is that they create collaborative improvisations as part of a socially engaged sound art practice, enabling yet another level of reflection about soundscapes, in relation to a broader discourse on art, society, topography and place.

Sound(ing) art itself is often interdisciplinary in nature. Many sound artworks are more than just (about) sound or sounds. Consequently, neither acoustics nor musicology, to name two disciplines in which certain manifestations of sound are studied, nor any other single discipline, is able to fully encompass the questions posed by particular sounding artworks on its own. These questions, such as those pertaining to the role, position, and function of sounding art in contemporary society, as well as the manner in which sounding art can be both reflexive and constitutive of social, cultural, political, religious, ethical, and perhaps even biological or cognitive developments, always demand an interdisciplinary approach. Sound can be investigated from almost any angle, and sound studies can include numerous disciplines and subjects. These range from history, to philosophy, sociology, anthropology, the history and sociology of music and art, musicology, ethnomusicology, organology, sound art, urban, media, cultural practice, performance, science and technology studies, acoustics and psychoacoustics, medical

history, alternative medicine and healing, dance and movement therapy and architecture; to name some.

Within this milieu, the natural sciences, the social sciences, and the humanities can also benefit from the input of sound artists. Their perspective is of utmost importance in the gaining of more understanding, insight, and views on, for example, various cultural, social, technical, political, economic, historical, ecological, spiritual, psychotherapeutic and religious fields. Sound artists pose different questions or pose questions differently, which might enrich all sciences and research. Their “answers,” however, will always be tentative, cautious, and open to many interpretations— suggestions rather than absolute statements. Of course, when looking at the diversity of these angles, the inevitable question of a sonic epistemology arises. Which method or set of methods can we apply in order to be able to answer the questions posed in this thesis? Should we turn to sound studies and adopt their methodology? Do they have one?

Chapter 3 | Walking-with-sound: Methodological tools for sonic urbanism.

3.1 | Introduction

What has drawn my interest into soundwalks and soundmaps, is the capacity they possess to extend the experience of the perception of the city and to address issues of agency and participation. Here, there is much to be learnt from research/artistic collectives consisting of sound artists, architects, planners and geographers, inviting interested members of the public to contribute to the creation of soundmaps or the collective experience of a sonic drift through the city, by participating in a soundwalk. Indeed, such projects may reveal the intimate connection among citizens and their urban environments, by underlying relationships between movements, sounds and spaces; identifying them as social actors. This genre of sound(ing) art proposes an understanding of the city not only through experience, but also through the exchange of experiences, playfulness and creativity; promoting various social encounters (Silverstone & Sujon, 2005).

The opportunities for creative expression with new media in civic spaces, enhance the role of artists, researchers and audiences in experiencing space together; enabling the emergence of new ways for people to experience, document and share soundscapes, and what it elicited in them. Conducting research into ways that people experience and interact with public space through sound art, however, poses several challenges, as it relies on three basic structural layers: mobility, space and sound. Thus, two ephemeral and transient phenomena – walking trajectories and sound – need to be co-examined; together with the experience of space while being mobile. Therefore, relevant research tools and methods need to be employed to address issues such as the mobility of the listening public and to offer a better understanding of the embodied experience of space through sound and movement. Such requisite analysis though, calls for an interdisciplinary methodology and the development of multi-methodological approaches. Indeed, these methodological considerations are situated at the core of this chapter, which attempts to combine ethnographic and para-ethnographic tools, in proposing appropriate methods for the research of artistic practices in urban spaces involving walking and sound.

In the context of this research, the urban sound environment is considered as an object of description or transformation; and therefore, interdisciplinary methods are deemed necessary for conducting in situ analysis of sound. Here I propose the use of an interdisciplinary research methodology that firstly triangulates ethnographic tools, and experimental auditory phenomenology, and secondly understands soundwalks and soundmaps as a method for knowing soundscapes. In this, I will now proceed to discuss each separately, with reference to and in conjunction with, mobility, space and sound. My goal, at the end of this chapter, is to have contributed with a sonic research methodology informed by mobility, which will explore the audiences' opportunities for co-creation and active participation, as afforded by the use of mobile audio technologies in sound art. It is my belief that a research methodology for the artistic practices that uses mobile audio devices, can contribute to the development of new interdisciplinary theoretical and methodological frameworks, which will investigate sound(ing) arts in public space.

3.2 | Ethnographic methods

The ethnographic method, a precondition of anthropology in the 20th century, is linked to the concept of field research, in that it incorporates observation, recording, registration and involvement in the daily life of another culture. It is however not limited in these practices and it expands in various forms; and in recent years it has opened itself to interpretation, informed by semiotics, phenomenology, structuralism and critical theory of the Frankfurt School. The statement by interpretive anthropology's main rapporteur, Clifford Geertz, regarding "culture as text" (Geertz, 1994), indicates the differentiation from behavioural scientists who contend a natural science of society that studies social structures and behaviour. Here the interpretive dimension had shifted the research perspective of the anthropologist from behaviour and social structures, towards symbols, meanings and perception.⁵¹ With the acoustic

⁵¹ Interpretive theoretical tradition starts from the premise that access to social reality is only possible through different social structures, such as media and language, individual and collective consciousness, or common meanings and representations (intersubjectivity). This theoretical tradition includes different schools of thought, the most basic of which are philosophical interpretation (hermeneutics) and phenomenology. Here, interpretative social research seeks to understand social phenomena and social processes from the perspective of individuals and social subjects, emphasizing the complexity and multidimensionality of social experience. As part of this general philosophical and

turn, which was a result of the shift to an anthropology of the senses, however, anthropologists have approached the senses as more than another text to be read. Scholarship from ethnomusicology and anthropology of music, as well as mobilities and urban studies, inspired researchers to start hearing cultures in all their sonic diversity, instead of reducing them to visual models or collages, texts or dialogues (Erlmann et al., 2004). This opened up much terrains for investigation about Western conceptual distinctions, such as subject/object, here/there, self/other, place/space, music/non-music, and meaning/noise.

3.2.1 | Participant observation

Participant observation is one of the most commonly used methods to gather qualitative data; it is widely applied in cultural anthropology, ethnomusicology and the social sciences, because it allows for the systematic observation of social behaviors, phenomena and processes in real, natural social environments. This requires the researcher's involvement in the social processes being researched, with constant interaction between researcher and research subjects. The level of the researcher's participation in the social groups and/or process investigated, plays a key role in this method. Traditionally, the level of participation is classified into four categories: complete participant, participant as observer, observer as participant and complete observer. Participatory observation concerns the first three of the abovementioned categories, since the observer is not involved at all in the last. In most cases, the method of participant observation is usually applied in research on small and cohesive social groups, social phenomena and processes that comprise the research field; and it aims at in-depth analysis and understanding of human and social relations, through rich qualitative data describing the relevant social situations. This description is called "thick description" (Geertz, 1994).

In an ethnographic context, the concept of the *field* has become more complicated due to the mediation and mobilization of everyday experience. Traditional ethnography typically situates a researcher in one field site for an extended period of time. The researcher does not traverse many spaces but gets to know one setting extremely

epistemological tradition, hermeneutics and phenomenology are increasingly informing qualitative research.

well. Departing from traditional ethnography, researchers conducting *multi-sited ethnography* follow a research topic or social phenomenon in various field sites, geographical and/or social, and across different spaces for shorter periods of time. Multi-sited ethnography is a mode of ethnographic research that “moves out from single sites and local situations of conventional ethnographic research designs, to examine the circulation of cultural meanings, objects and identities in diffuse time-space” (Marcus 1995, p.96). Since its conception, multi-sited ethnography is congruent with the movement of social sciences towards postmodernist tendencies, specifically following the impact of the “writing culture critique” (Clifford & Marcus 1986), and the phenomenon of globalisation.⁵² According to Marcus, multi-sited ethnography solves the need for a method to analytically investigate transnational processes, mobile groups of people, and practices spreading over multiple locations. When conducting multi-sited ethnography, spaces can be geographic, social, or digital, depending on the research topic followed. Marcus contends that researchers can follow people, a “thing,” a metaphor, story, life/biography, or conflict. Following a “thing” is the most common practice in multi-sited ethnography, and this involves tracing commodities, gifts, money, art, and intellectual property (Marcus, 1995).

When the “thing” followed is sound, the existence of multiple research sites is a given. Performative sound art works are taking place in different countries, cities and neighbourhoods; they are part of conferences, festivals, workshops, urban intervention projects and artistic experimentation. In the case of mobile sound art, spatial environments influence physical experience and encourage or discourage varieties of social interaction; allowing a more dynamic understanding of the environment and a more active role within it. Collaborations between artists and researchers have resulted in the creation of interfaces and software tools, which facilitate and stimulate creative research processes for using field recordings and sound. These interfaces and software tools create a shared listening-led framework, specifically for new approaches to making and remaking of cultural memory through

⁵² For more information on the subject of globalization see (Ahmed and Donnan 1994; Appadurai 1996; Auge 1995; Featherstone 1990; Gupta & Ferguson 1992; Kearney 1995).

sound and technology, and thus enabling the experimentation with sound as alternative media for research and representation.

Using the tool of participant observation in the multiple sites where mobile sound artworks take place, allows researchers to understand the variety of perspectives involved with the specific idea/action/process. It also enables the collection of multiple data for comparison and contrast during analysis, while being indicative of how seemingly disconnected spaces ultimately affect a specific population. The existence of multiple sites, however, may prevent researchers from getting to know one site in-depth; potentially resulting in poor quality of data. Indeed, the abundance of possibilities may overwhelm the researcher and cause limited clarity of the project. Thus, in order to overcome these methodological implications, the researcher must pre-define the research field, placing the focus of the work on the connections achieved by the subjects, since “the essence of multi-sited research is to follow people, connections, associations, and relationships across space (because they are substantially continuous but spatially non-contiguous)” (Falzon 2012, p.1-2). For Marcus, the goal of this methodology as a tool, is “to pursue the more open-ended and speculative course of constructing subjects by simultaneously constructing the discontinuous contexts in which they act and are acted upon” (1995, p.98).

3.2.2 | The artwork as fieldwork

Experimental ethnographies, integrated in the theoretical framework of interpretive anthropology, are researching the kinds of interaction and relationships existing between participants, communication technologies and place. Experimental ethnography is used for tracing the connections between public, technology and space, and to analyse not only emergent socio-technical systems, but also how individuals interpret and interact with such systems. For this purpose, it uses art as a critique of everyday life in order to authentically represent cultural diversity. It is experimental because people participate in a qualitative quasi-experiment, and ethnographic because it uses research methods from anthropology. The findings deriving from this method are organized around the themes of technological identity, issues of place, social knowledge and social costs and opportunities. Experiment is a “knowledge-generating procedure” (Macdonald & Basu, 2007) for experimental ethnography. It investigates the possible relevance of the experimental design

process in the applied arts, for the anthropological practices of experimental ethnography.⁵³

In recent years, anthropologists looking at art have used non-documentary creative techniques, which include multiple media (music, film, dance, etc.) as part of their work to describe or represent cultures. However, while anthropology has become more conscious of itself as literature, it still has not fully freed itself to experiment with unfamiliar genres of representation (Schneider & Wright 2010). Of course, there have been advances, like sensory ethnography⁵⁴ and various kinds of ethnographic performance or performed ethnography.⁵⁵ These and other approaches have bridged or questioned the space between anthropology and art; suggesting that “fieldwork is an artistic practice, just as art is, or can be, a fieldwork practice axis” (Schneider & Wright 2010, p.50). The subjective experience of the senses, a primary element of artistic practice, inspired the ‘sensory turn’ in anthropology, which understands what is perceivable by the senses to be an important aspect of fieldwork.

This perceptive nature of praxis is also a core theme in research on sound art practices, where this distinction between experience and interpretation is blurred. Here, a variety of art/research projects makes it possible for researchers to situationally experiment with social interactions (Galloway, 2004; Brighenti, 2010); marking a performative turn in various public culture and exhibition projects. Tatsuo Inagaki’s artistic projects for example, suggest that notions of fieldwork as artistic practice and art as fieldwork (Schneider & Wright 2010) are indeed worthy of exploration. He recognizes various possibilities for art in public spaces and believes that art should be actively engaged with society. For Inagaki, fieldwork is also an effective method to get to know a region and its local people’s way of life, through art projects that involve collaboration with local residents and their area. In this, Inagaki

⁵³ Bruno Latour’s writings have inspired experiments in ethnography that make use of the ideas of multiple “actants.” Latour (1999) argues that the experiment can be seen as a transformative process – for the people as well as the materials involved.

⁵⁴ Sensory ethnography is an emerging trend within visual anthropology, with practitioners focusing on at least two different aspects: the aesthetic-sensual and the multisensory-experiential. It promotes innovative combinations of aesthetics and ethnography.

⁵⁵ For reflexive performance and autoethnography see (Denzin, 2003; Saukko, 2003).

believes that art has the potential to create places and opportunities for interpersonal communication.

Experimental practices are opening up new possibilities for relations between social subjects, artists, curators, stakeholders, and the public. These relations are the artwork in a processual sense, falling into the category of relational art.⁵⁶ In the case of sound art, the social subjects being researched are members of the listening public who experience place, and perform their identities as sonic citizens, through walking and listening; thus probing a phenomenology of experience and consciousness through “intensely lived” fieldwork experiences (Titon, 1997).

3.2.3 | Research interview method

In addition to the method of participant observation, interviews are used to address the embodied sonic experience, as well as the participatory co-creation practices and the mobility of the public. The research interview is one of the most prevalent methods for gathering qualitative data and information in social sciences; and as a research tool it takes many forms: be it structured interviews, based on a structured interview plan or questionnaire, face to face interviews, phone interviews, etc. In social research the primary focus is the social object, thus the role of a research interview is to examine what the social object is, how it functions, how it is transformed, and what kind of social relationships describe it. In the research interview, interpretive, evaluative, advisory, and testing approaches are avoided, since the objective is to understand the phenomenon and the system of relationships between people and their social environment.

Depending on how structured the interview is, i.e. the degree of its standardization by the researcher, we can distinguish three main types of research interviews: structured interview, semi-structured interview and unstructured interview. In qualitative social research, the latter types are mainly used, as they allow for in-depth information and data extraction, or can unveil issues that were not predetermined by the researcher. The aim is to highlight the emotions, motivations, and

⁵⁶ Works of relational art are based on social relations, either altering them in some way or using them directly as the artistic material. See (Bourriaud, 2002).

representations; our images for being in the world. The semi-structured interview on the other hand, is characterized by a set of predefined questions, but allows much more flexibility compared to the structured interview; such as the order of questions, the modification of question content depending on the response, or providing the option to add or remove questions and topics for discussion. The semi-structured type of research interview maps the space of the interview and uses the interview guide. Another approach is that of the life narrative, a narration through interview, a true story improvised within an interactive relationship; with the researcher who directs the interview, adding a personal dimension. The biographical approach enables profiling of past conditions, but only to the extent that they help the interviewee to give an already 'processed' image of themselves and of their course, since the goal is to highlight a historical-empirical reality; that is, what the subject thinks of history in the present.

A combination of semi-structured and narrative interview is more efficient in the audio-spatial context of artistic projects, as it is more open to the space of everyday sounds. In deploying these tools, the aim is to investigate in what ways background noises, incidental sounds, audible context and interference affect the experiencer. In addressing these questions, noise is at the core of the procedure, in combination with sound and movement. The aforementioned approaches keep the auditory everyday in play in the interview context, in order to address "the elusiveness of the lived ordinary" (Hall et al, 2008, p.1023). So as to bring these terms—sound, space, the everyday—into creative synthesis, mobility is what takes us forward: sound, space, and the everyday come together in movement (p.1030). We participate in soundwalks or develop soundmaps as mobile explorations of space and soundscapes, in what McCartney describes as "an approach to the ethnography of place, which focuses on listening as a way towards understanding the communications of a sounding environment" (2000, p.28). As such, mobile sound artworks are reactivating one's sense of hearing, by attending to the sounds of the everyday, foregrounding a background context to daily life, while being mobile.

Set against this background, walking then as a method and tool of inquiry about place, is used in a wide variety of approaches such as geography, philosophy, architecture and urban planning, acoustic ecology, and performing arts (Butler, 2006). Thus, in

incorporating the act itself and its effects within our context, next, I consider tools and methods for engaging with walking figures, which are committed to the sonic-spatial politics of the urban condition and the everyday.

3.3 | Walking as method: research and artistic praxis

For Tim Ingold (2008), walking, is a quintessential feature of life, a fundamental to the everyday practice of social life. It is also fundamental to anthropological fieldwork. His research with Jo Vergunst in the region of Aberdeen and north-east Scotland, involved participant observation in the form of sharing walks with informants, along with semi-structured interviews on the subject of the material culture of walking (Coleman & Collins, 2006). Walking is understood as an enlightened everyday practice that probes the ways in which pedestrians are appropriating public space and invest in it through their daily movements. For Ingold, walking is as a kind of conversation, a profound social activity that is not enacted in situ but paced along (Ingold & Vergunst, 2008).

Therefore, careful ethnographic analysis of walking can help us rethink what being social actually means (ibid). Employing multi-sited ethnographic methodologies that centre on walking practices, enables researchers to achieve a better insight of the embodied, multi-sensory way in which people experience things on the move. Ingold argues that walkers actively engage both in the act of walking and in the construction of their own identity as walkers; achieving personal empowerment, while at the same time re-establishing “an equal footing” (Ingold & Vergunst, 2008, p.158) between them, car drivers and other city dwellers; thus attaining also a collective empowerment. This idea of pedestrian empowerment captures how urban walkers are nowadays aware of the growing role they play in their cities, to the point that on various occasions they consider themselves to be an emergent group of urban actors.

Ingold draws on phenomenology to emphasize how people experience the world around them in their day-to-day activities. Walking as research method is applied to address the ways in which we experience the environment through our moving bodies, and to investigate emplaced walking with ensounded body, as, for Ingold, “we hear *in* sound” (Ingold, 2007a). This is also echoes Maxine Sheets-Johnstone’s phenomenology of movement and her concept of a “kinetic bodily logos,” a way of

corporeal and sociocultural kinetics (1999). This phenomenology of embodied movement, which displaces the emphasis from perception to movement, can be described as a situated learning through audition, a self-awareness through kinesthetics, and in the case of a sound walk/map, it can be described as situated learning through audition. Devotion to the promotion of walking, brings forward new urban policies, which address different mobility needs; calling for active collaborations between the local population and city authorities, and resulting in interventions through artistic, cultural and social animations. Therefore, by providing extra motivation for walking, public places evolve into hybrid places, capable of fulfilling leisure expectations and more utilitarian needs.

In the arts, as well as in philosophical thinking, walking is often deployed as a way to establish a privileged and dialectic relation with the everyday and the mobility of the city itself; of its physical and intangible transformations. Several artists have developed walking works that advance multiple approaches to walking: Artists Ai Weiwei and Anish Kapoor walked from the Royal Academy of Arts to the Orbit in London to show solidarity with refugees around the world, as a form of artistic activism or as a symbolic action (Brown, 2015). The pair of artists was joined in their walk by hundreds of other walkers “demanding creativity of others,” but also “making a creative act” (ibid).

Walking as a critical commentary on power relations and spectatorship, is also evident in Rowan Tara de Freitas’s work, *Birdwatching*, which centres on the image of the woman seen in consumerist space (Tara de Freitas, 2014). And the idea of walking as a flâneurish wandering, is demonstrated in Bill Aitchison’s work, *Tour of all Tours*; when the London-based artist started doing guided tours in different places in 2014 (Aitchison, 2018) in an attempt to experience the point of view of a “local” (Kenins, 2013). Stalker collective in Italy for example, are exploring the outskirts of Rome; working amongst others with the Roma and gypsy populations of Europe, Kurdish migrants and the homeless; and they consider their walking works as a method that brings space into being or activates territories (Stalkerlab, 2008).

Performative walking as a pilgrimage or a ritual is the theme of the Abramovic-Ulay walk along the Chinese wall in 1988. The concept was for the two artists to approach

each other from the two ends of the Great Wall of China, in order to say good-bye and end their relationship; as a piece of performance art (Johnston, 2012), informing a rather complex interaction with other cultures (Mignot, 1989). In deploying walking as tactical praxis, the series of walks by Francis Alÿs use sound to evoke and capture some of the distinctive qualities of place; negotiating the artist's role in relation to the conflict playing out in the urban landscape.

Either by allowing the observation of urban becoming, or by re-reading and redefining the urban structure, the plethora of “micro-practices of walking” (Biserna, 2015) provides multiple ways to understand the relation between art and walking. Walking is central to, and plays an important part in, the embodied experience of the city. It is a way to experience space and to speak about it other than with text; while also closely related to power, to knowledge production, surveillance, gentrification or proprietorship of a place. In the context of this research, walking is used and performed as a Situationist act; one of intervening in everyday life and of exploring a place with the mediation of sound. Thus, if walking can be considered a way to establish an embodied, situated and mutual relationship with the environment (Haraway, 1988; Thibaud, 2003; 2013) - where opportunities to participate arise in the public sphere and create spaces of encounter with others (Solnit, 2002) - the same could be said of listening (Goh, 2017; Lacey, 2016). Clearly then, walking-with sound art works can shape and affect sonic representations and experiences of space.

3.3.1 | Walking interviews

Hall et al, in their research within sites of community and topographic transformation in South Wales (UK), conducted recordings of biographical interviews collected in, and moving through, noisily active and changing locations; with respondents commenting on, and amid, the sounds of the urban everyday—traffic, weather, commerce, mechanical and animal registers, construction, passing conversation, incident, entertainment (2008, p.1031). These mobile conversations - informal interviews set in motion through and between places - also allow places to ‘speak.’ Indeed, this method is a contribution to the growing awareness of the significance of the sonic world being open to qualitative inquiry, in all its ephemerality and everydayness. Noise, music and everyday sounds don't necessarily carry the same meaning or refer to a common perception of the way sounds are composed. Sonic

marks unconsciously guide our behaviour and are not limited by cultural or stereotypical assumptions. Augoyard and Torgue invite us to listen to our cities and listen to the signature sounds of everyday-life, usually composed by many sounds. They describe the city as a real musical instrument, whose instrumental dimensions require examination; and Augoyard compares material and spatial characteristics of urban morphology with aspects of acoustic instrumentation (Augoyard & Torgue, 2005, p.4).

A pilot study by Evans & Jones (2011) deployed a qualitative GIS technique to analyse the effectiveness of walked interviews in capturing data deriving from people's understanding of place. The authors gave an account of the walking interview exploring two issues: the relationship between what people say and where they say it; and qualitative and quantitative differences between data generated by walking vs sedentary interviews. They showed that walking interviews generate richer data, because interviewees are prompted by meanings and connections to the surrounding environment and are less likely to try and give the 'right' answer (2011, p.849). The mobile methodology of walking in the street means that both researcher and informant are more exposed to the multi-sensory stimulation of the surrounding environment, giving immediacy as well as a kinaesthetic rhythm (2011, p.850). Literature suggests that the major advantage of walking interviews is their capacity to access people's attitudes and knowledge about the surrounding environment, echoing the trend among social scientists and geographers to use techniques where researchers walk with participants (Anderson, 2004; Carpianto, 2009; Kusenbach, 2003). Ingold and Vergunst (2008) suggest that walking with interviewees encourages a sense of connection with the environment, which allows researchers to understand how, for example, places are created by the routes people take.

Walking interviews are also a highly productive way of accessing local communities' connections to their surrounding environment. Such interviews tend to be longer and more spatially focused, engaging largely with features of the area under study, rather than with the autobiographical life narrative of interviewees. In CRESSON, the Centre for Research on Sonic Space and Urban Environment, Augoyard and his team are using "commented city walks" for the study of urban environments that investigates in-situ experience (Thibaud, 2013). A perception-in-motion requires walking,

perceiving and describing simultaneously; and this interdisciplinary method is based on perception, both in situ and based on mobility, as well as the interweaving of words and perception. It uses hermeneutics to understand the role of perception in the social construction of reality; and the use of audiovisual material makes it possible to conserve the activity in situ. Here, the combination of participant observation and verbal description of the experience, informs us about how the sensorial qualities of the activity have an effect on participants' experience; together with their creativity, willingness for participation etc. Commented walks, designed by Jean-Paul Thibaud, aim to "complement ... the usual metrological surveying techniques used in urban acoustics" (Tixier, 2002, p.83). This method is based on three central hypotheses: the in-situ nature of perception, perception based on motivity, and finally, the interweaving of words and perception. It highlights the sonic knowledge of the participant; allowing them full freedom of movement, pace, and sound-making throughout the walk.

Commented walks can be applied in various cases, such as neighbourhoods, shopping malls, museums, railway stations, underground networks, transport hubs, underground public spaces and large urban projects; and this type of field research is well suited to studying urban ambiances in situ (Thibaud, 2013). Its method draws on the reflexive capacities of participants and their ability to verbalize and interpret their experiences. These descriptions of perception then provide access to emerging sensory phenomena; with the only tools needed to access the sensory experience of participants, being walking, perceiving and describing. Here, in situ descriptions appear to be the best for interpreting data and answering the research questions. Researchers at CRESSON for example, compared the physical characteristics of urban settings with the perceptual awareness of its inhabitants and users. This attention to earwitness's accounts, uses a phenomenological perspective, while emphasizing exploration of dynamic interactions between the physical environment, the socio-cultural milieu and the individual listener (Augoyard & Torgue, 2005, p.xviii).

Movement reveals sensory qualities, since the moving body understands better the sensory construction of space. Movement is also based on the plurality of perceptions. To make what is sensory intelligible, we use words. According to hermeneutics, spoken language (descriptions) actually participates in the experience. For Gadamer

(1975) language is that within which anything that is intelligible can be comprehended, therefore language bridges perception with concept. In a mobile, walking context, the *step* is considered as a signifying gesture; footsteps weave places together (Ingold 2007), and the step is our way to participate in and comprehend our experiences of place. In de Certeau's words (1984), "the act of walking is to the urban system what the speech act is to language or to the statements uttered [...]. [I]t is a process of appropriation of the topographical system on the part of the pedestrian [...]. [I]t is a spatial acting-out of the place (just as the speech act is an acoustic acting-out of language)" (pp.97-98).

Within this milieu, the "go-along" is a qualitative ethnographic research tool that brings to the fore some of the transcendent and reflexive aspects of lived experience as grounded in place. It is based on Anderson's (2004) "conversations in place," reflecting on talking whilst walking, and Kusenbach's (2003) introduction to the "go-along" as a qualitative research tool. Both authors insist on the significance of the embodied experience of place, developing arguments about the epistemological advantage of conducting conversations with informants in motion, through place(s). Anderson explores how understanding of the lived experiences of individuals can be acquired by making geographical context more assertive within qualitative research methods. Focusing on "conversations in place," he suggests that conversations held whilst walking through a place have the potential to produce a collage of collaborative knowledge (Anderson 2004, p.254). Kusenbach identifies a rising awareness of the researchers' own positionality in ethnography, sometimes characterized as the "reflexive turn" (Emerson, 2001) and acknowledges that the reflexivity of the phenomenological method need not put an end to phenomenological practice; it can instead contribute to its sophistication and progress (Kusenbach 2003, p.458). Drawing on her ethnographic fieldwork conducted in two urban neighbourhoods, Kusenbach argues that the go-along method brings greater phenomenological sensibility to ethnography.

Compared to other ethnographic methods, go-alongs provide privileged access to various themes, which sometimes tend to be pre-reflective and visually elusive (Kusenbach 2003, p.466). First, they can help ethnographers reconstruct how personal sets of correlations guide their informants' experiences of the social and

physical environment in everyday life; unveiling the complex layering and filtering of perception. Secondly, they offer insights into the texture of spatial practices; revealing the subjects' various degrees and types of engagement in and with the environment. Thirdly, they provide unique access to personal biographies, while fourthly, go-alongs can "illuminate the social architecture of natural settings" (ibid) such as neighbourhoods. Finally, they contribute to the explorations of social realms, by their varying patterns of interaction. In many ways, this method has the form of a phenomenological ethnography, in that it is informed by phenomenology, which considers our experience of the environment as fundamentally based on the coordinates of our living body, giving place primacy over space.⁵⁷

Mobile media technologies are creating interfaces and software tools that facilitate and stimulate creative research processes that capture human experience, using field recordings and sound. These interfaces and software tools are creating a shared listening-led framework, specifically for new approaches to making and remaking of cultural memory through sound and technology. And it is thus the potential of mobile methodologies in this field, which will be explored in the section that follows.

3.3.2 | Aesthetics and qualities of mobility: mobile methodologies

Locative media technologies are used to geo-locate information, track changes, make comparisons, and capture human experience within a map; enabling percipients to express their own ideas about the spaces they inhabit. Now, in an era of fully networked and increasingly mobile citizens, new possibilities open up for using mobile media to make music and sound art. Drawing on locative art's cartographic understanding of space, sound art that connects audio content and place, proposes a new level of interactivity: place comes to provide a new means of interaction while mobility operates as a way of navigating the everyday life context. In this sense, location-aware and locative media (LM) open up new social and cultural possibilities:

⁵⁷ Kusenbach (2003) argues that the innovative method of the go-along, through combining some of the strengths of ethnographic observation and interviewing, is a tool particularly suited to explore two key aspects of everyday lived experience: the constitutive role and the transcendent meaning of the physical environment, or place. Ethnography's traditional methods - participant observation and interviews - even though they are the basic tools for conducting ethnographic research, present some limitations when the subject is moving in an everyday-life context. They can let important aspects of lived experience go unnoticed; and despite their many strengths, these methods are neither the only, nor the first, choice for all areas of sociological and phenomenological inquiry.

the soundscapes of the city can be made mobile and go public thanks to multimedia technology. According to Charitos (2007), these technologies enter in complex, unpredictable and not immediately apparent aggregations of acting individuals and technological constructs, thus constituting actor-networks, which are socio-technological hybrids.

A mobile method is therefore needed for investing in these actor-networks on the move. Building on Lefebvre's (2004) idea of "rhythmanalysis," this critical turn in the field of urban studies has brought a reconceptualization of mobility and place-making to emphasize how rhythms, forces, atmospheres, affects, and materialities enable meaningful interactions between the bodies and the objects that shape cities (Sheller, 2014). Along with spatiality and materiality,⁵⁸ there is also a growing interest in temporalities as these rhythms of movement are shaping bodies and objects in turn.⁵⁹ This wider sensuous turn to the embodied, kinesthetic and sensory perceptions, along with new mobile communications systems, are transforming urban spatialities, materialities, and temporalities: "Motion and emotion, [...] , are kinesthetically intertwined and produced together through a conjunction of bodies, technologies and cultural practices" (Sheller, 2004, p.227).

The use of mobile computing, wireless networks, and digital media for the purpose of associating information and meaning with geographic locations via location-detection technologies, has led to the concept of locative media (Tuters, 2004). Mobile and locative media (LM) comprise of systems of technologically mediated communication, providing the opportunity to relate physical environments to digital information, in

⁵⁸ In 1980, the geographer and urban planner Edward Soja coined the term "spatiality" to refer to the attributes of a space that is essentially social. Soja elaborated on "spatiality," discussing the notion of a space which is produced because of the social life; a space whose organization and meaning is subject to multiple transformations and contingencies. A space, thus, where temporality and social relations are at its core. He reflected that way on the production and organization of the social space following the previous work on the topic by Henri Lefebvre. Soja updated Lefebvre's concept of the spatial triad with his own concept of spatial trialectics which includes Thirdspace, or spaces that are both real and imagined, where "everything comes together... subjectivity and objectivity, the abstract and the concrete, the real and the imagined, the knowable and the unimaginable, the repetitive and the differential, structure and agency, mind and body, consciousness and the unconscious, the disciplined and the transdisciplinary, everyday life and unending history" (1996, p.57).

⁵⁹ See Lefebvre on the importance of time for the lived experience. It is not possible to uphold the idea of a city without the temporal actions that take place in it, its everyday rhythms (2004).

order to create 'hybrid' spatial experiences, which in turn may function as the context for social and cultural activities.⁶⁰ The use of this media has already resulted in new ways of creating, representing and communicating meaning in relation to space, and consequently to emergent artistic practices. Such technological elements are "enrol[ing] people, space, and the elements connecting people and spaces, into socio-technical assemblages" (Sheller & Urry, 2006a, p.9). The ability of LM to gather contextual information has created new affordances for urban dwellers to traverse public space, generating a new form of urban spatiality; informed by (trans)mediality, bodies and data, resulting to the idea of "technoscape" (Appadurai, 1990), "remediated" space (Graham, 2004), and "hybrid" space (Kluitenberg, 2006; de Souza e Silva, 2006). Most importantly, these advanced sensing systems and location-detection technologies are "changing the nature of the empirical, reconfiguring the relationship between observer and observed, and reinventing methods" (Sheller & Urry, 2006b; Sheller, 2014, p.12).

Mobility thus enables social and material realities that generate new modes of empirical research regarding the ways in which cities are being transformed. Combined with group walking experiences and the affective and material dimensions of these hybrid spaces, mobility allows the potential for more experimental methods to open up a new place for social investigation in our cities. These methods are usually collaborative; they mobilize "political commitments and methodological cross-fertilization to generate transformative hybrid approaches to the social-spatial-cultural matrix in which we move, dwell and build the future" (Sheller, 2011, p.8). Echoing this turn, the act of walking as a performative and collaborative act finds fertile ground in the artistic expression of soundwalking, promoting a dialogue between subjective consciousness and the dynamics of space; where the role of sound in relation to spatial perception relates to the embodied listening through movement. Lefebvre's concept of "rhythmanalysis," has informed soundwalking practices, since it uses the idea of rhythm as an interpretative and analytical tool for understanding

⁶⁰ In the context of this thesis hybrid spatial experience is virtual as well as physical. For a more complete definition of the term "hybrid space" see (Kluitenberg, 2006) and (de Souza e Silva, 2006).

everyday-life practices, with a focus on embodied listening. Rhythm, as a way to experience the city, is an essential characteristic of social life, which according to Stavrides (2016) can shape control mechanisms, but also give form to practices that exceed dominant rules.

Mobility enables a re-thinking of the role of space by mobilizing sound as its acoustic companion in artistic production (LaBelle, 2006, p.232). This potential extends and multiplies social spaces by multiplying acoustic perspectives and increases the potential for new forms of aesthetic acoustic experience. With the use of LM, sound(ing) art practices are transforming the urban landscape by sounding situated knowledge. Locative media also locates human and non-human bodies, subjects and objects – such as sounds – enabling the formation of urban social networks. The spatial turn proposed an extension of the understanding of sound and its relation to place, rendering this relation - as an indirect and remote geography - the basis for artistic creation.⁶¹ The mobile sound(ing) art subgenres that I discuss in this thesis, are examples of this development of spatial, acoustic and informational layout, and of mixed realities and digital landscapes; which also function as layers of social interactions that take place in the new networks they form. The hybrid space of a sound walk/map is thus a conceptual space created by the merging of borders between digital and physical spaces through the use of locative audio technologies on mobile devices. However, the hybrid space of sound art is not constructed by technology alone; it exists at the intersection of mobility and communication with the social networks developed simultaneously in physical and digital spaces (de Souza e Silva, 2006).

Research into mobility promotes interdisciplinarity, calling for multiple methods and practices. To this end, novel mobile methodologies are emerging, attempting to investigate the complex and dynamic procedures involved; from digital ethnographies,⁶² to participant observation on the move - using methods that enable

⁶¹ Spatial turn understands space as a social construction, shaped from physical, social and political geographies.

⁶² Digital ethnography refers to online research methods that designate online fieldwork and adapt ethnographic methods to the study of the communities and cultures, created through computer-mediated social interaction.

being-mobile-with participants, to mobile video-ethnography (Spinney, 2011) and various phenomenological approaches (Ingold & Vergunst 2008; Thibaud 2013). Sheller and Urry, for example, have argued about the need to develop new “on the move” research methods that will “simulate intermittent mobility” (2006, p.217). Their “mobile methods” include interactional and conversational analysis with moving participants, mobile ethnography involving peripatetic movement with informants, following objects and co-presenting immersion in various modes of movement, interviews and focus groups about mobility, along with sustaining multimedia like time-space diaries. An emerging area of research concerns ways in which cities are being transformed by embedded technologies, digitally augmented spaces and ambient environments, such as smart cities, described as a “remediation” of the material environment with digital technologies.⁶³ Moving on, I will now consider how merging mobile sound(ing) art with anthropological research, in the form of sound walks/maps, can be used for the development of a sonic-social phenomenology.

3.4 | Phenomenologies of sound

In the book *Listening and Voice* (2007), Ihde makes a point about the phenomenological autonomy of the auditory mode. He states, that by starting at the perceptual level, we can describe the shape of experience; thereby uncovering the unvarying structures that shape human experiences, regardless of culture, race, gender and class. His work on the nature of perception and on the phenomenological knowledge of listening and sound, provides a set of claims: The first is that our auditory focus is omnidirectional; immersing us in the sound that surround us, while the source of sound is generally experienced as located and as directional. This “double dimensionality” (Ihde, 2007, p.77) of the auditory field is the source of both the ambiguity and the richness of our auditory perception. Secondly, that perception of sound is the result of the focus on one or other sound, through variations of background and foreground attentiveness. This version of polyphonic listening is

⁶³ New mobile media is further revising urban habits by introducing new navigation features in public space. People, as well as information, bodies and data, are moving into the digitally augmented urban space described as “remediated space” (Graham, 2004), “hybrid space” (de Souza e Silva, 2006), or “networked place” (Varnelis & Friedberg 2006).

associated with the double possibility for both perceptual and imaginative modes of listening, “in the sense of one being the “echo” for another” (p.133). Thirdly, there is a perceptually constant auditory presence, characterised by the continuity, by the “ebb and flow of noise” (p.81), and movement of sound. This continuous presence is common with all senses, but according to Ihde, sound has the ability to penetrate our awareness. Lastly, he asserts that sound can be perceived spatially, enabling people to hear sonic shapes, surfaces and interiors.

In making the ‘sonic turn’ in the model of phenomenology, as Ihde does, it is important to understand when speaking of perception, that the primordial sense of experience is global (p.43).⁶⁴ Ihde contends that in adopting “an existential phenomenology it is the body-as-experiencing, the embodied being, who is the noetic correlate of the world of things and others” (ibid). By “noetic correlate,” he is referring to what he also calls the “subject correlate,” or the “noetic act,” an act of experience or the experiencing. This occurs in correlation with the “noema,” or the “object-correlate” or “noematic correlate” i.e. that which is experienced is “referential, directional and attentional [...] the name for this shape of experience is intentionality” (p.35). Perception is also constituted by cultural and social structures, and affected by cultural practices and social institutions, which pervade every level of perception. Primacy of perception does not entail the priority of perception, as if it is separated from culture or society. Primacy of perception is about the lived body as a creature of cultural and social processes. According to Feld, perception is synesthetic; an affair of the whole body sensing and moving (Basso & Feld, 1996). Perception is also

⁶⁴ Since roughly the mid-1990s, scholars in a number of humanities and social science disciplines have turned their attention to ontological, epistemological, and phenomenological questions concerning sound, investigating its corporeal, cultural, and political resonance. Scholarship concerning the sonic has exploded in recent years. For Porcello (2007), this “sonic turn” has simultaneously been a turn to the technological; not only the technologies of music production, reproduction, and consumption, but also the technological practices of musicians, sound artists, sound engineers, producers, and listeners. In current critical and cultural theory, the ‘sonic turn’ has emerged alongside other materialist turns that have captured the contemporary theoretical imagination, such as New Materialism, Speculative Realism, Object-Oriented Ontology, Actor-Network Theory, Affect Studies, and so on. For new perspectives on sound from musicology, cultural studies, and the social sciences, see Kahn (1999), Bull and Back, eds. (2003), Erlmann, ed. (2004); Lysloff and Gay, eds. (2003), Feld (1994; 1996), Born and Hesmondhalgh, eds. (2000). See also Caleb Kelly, “Introduction: Sound in Art” and the work of Salomé Voegelin - *Listening to Noise and Silence: Towards a Philosophy of Sound Art; Sonic Possible Worlds: Hearing the Continuum of Sound* - who stresses the value of sound’s invisibility against the privileging of the visible in theory and knowledge.

constitutive; this is evident in the ways we perceive places. The influence is equally meaningful as it is sensuous.

Within the context of this research, Don Ihdes' post-phenomenology (2009) and his phenomenology of sound (2007), inform my research methodology because of their concern with embodiment and notion of a "lifeworld," and engagement with the philosophy of technology. Post-phenomenology is concerned with the documentation of the forms of technological mediation; and according to Ihde, technology is itself a way in which experience is mediated. This concept is a "step away from generalizations about technology [...] and a step into [...] an appreciation of the multidimensionality of technologies as material cultures within a lifeworld" (Ihde, 2009, p.22). In variational theory, there is an implied embodied position, with a certain degree of fluidity and movement, as the viewer's perception continuously changes. Embodiment then comes into play as active perceptual engagement, revealing "the situated and perspectival nature of bodily perception" (pp.15-16), affording an interaction design between the body and technology. As Ihde pointed out, we are able to determine the size of physical spaces through hearing as well as through vision, although occasionally the two senses provide contradictory information. In discussing sound's capacity to create boundaries or "horizons," Ihde contends that perceptually, such boundaries can only be temporal and not spatial: "horizon appears most strikingly as *temporal*. *Sound reveals time*." (p.102, italics in text).

In my research, space and time come together in place (Casey, 1996); they arise from the experience of place itself. To speak of space-time is to speak of event; and an event's spatial qualities and relations happen at a particular time. Feld uses the example of canoe building among Kaluli people (Feld, 1996) as both a way to engage in a spatiotemporal event of making – a bodily action calling for a particular place of construction – and a way to facilitate the reaching of other islands by a specific pathway (keda) between them. Canoes thus connect one set of liminal rituals intra-island (what happens in place), with another set, inter-island (what happens between places). At the end, both sorts of rituals are bound to place. An important aspect of being in a place or region is that one is not limited altogether by determinate borders (legal) or perimeters (geographical). Here, borders don't appear to play a significant role in the experience and knowledge of places. Born, in reading Feld who states that

sounds are heard as moving, locating, and placing points in time, describes Ihde's phenomenology of sound as a-historical and a-social. She argues, contra Ihde, that music and sound afford an embodied understanding of active perception for the listener (Born, 2013, p.14), and as it will be shown below, can outline both spatial and socio-spatial, as well as temporal horizons and boundaries; a fusion of space and time that joins lives and events as embodied memories.

A phenomenological ethnography aims to answer the question of how phenomenological structures of lived experience should be studied; and here, the study of mobile audio has many applications toward artistic, social, musical and other transmedia practices. By extending the cultural aspect of phenomenology into the research of technologically mediated aural practices, which themselves engender dialogue between cultural experience and place, we can develop a convergence culture; a more thorough and detailed account of the modern technological experience. In this, a mediated soundwalk or soundmap, demonstrates how notions of embodiment become manifest in the context of audio mediation; with auditory phenomenology residing at the intersection of sensory ethnography and cultural studies. Employing a phenomenological discourse thus adds to the description of the attributes of aural experience and to the relation of the body with its sonic environment.

Walking and listening are deployed as an empirical method for identifying a soundscape or components of a soundscape, to produce qualitative analyses of urban soundscapes, or to inform practices of urban design and planning. This has led to a range of interpretations of soundwalking and soundmapping as a methodology; and in this section, several research projects and sound works that have advanced the concept, are described and analysed. Some have employed it as a means through which the researchers immerse themselves into the urban soundscape, while others have used it as a way of engaging citizens in the practice of listening to and describing the city. The most common method for conducting a soundwalk includes a focus group, together with design professionals such as planners, architects, developers and consultants, in incorporating the concept of soundscape into the planning process. Using the soundwalk at an early stage of the planning can be informative, as well as time and money saving. Adapted for public consultation purposes, it enables users of

the location to contribute to the soundscape design. Incorporating the soundscape concept early into the planning process thus gives the opportunity to auralize and evaluate the soundscape in a systematic way. As a method, soundwalk is highly adaptable, as it can be performed alone or with others, along different locations and across various disciplines; and for different ends.

Whether we are listening in a private setting or in a public place, in the urban jungle or in the tropical rainforest, when riding the tube or doing our grocery shopping at the supermarket, we are always immersed in sounds; sounds that can entertain us or annoy us, interrupt our thoughts and routes or inspire them. For Cobussen et al (2016) the fact that we are always surrounded by sounds has been ignored by industrial enterprises that “spend more and more money on the auditory features of (electronic) devices” (p.4), while they argue that the actual sonic design as a discipline is still not very developed. They note that sonic design plans, if any, are mostly focused on the lessening of ‘noise’, with urban planners interested in the reduction of unwanted sounds. As an arguably much needed counterpoise to this status quo, a more creative and perhaps even necessary potential contribution arises from sounding art interventions within already-existing soundscapes (ibid).

In one example of such potential manifest, The *Positive Soundscapes Project* (Davies et al., 2007; Cain et al., 2008; Davies et al., 2009) utilized and adapted this concept of sound walking; creating a sociological methodology for identifying and understanding people’s experiences and perceptions of the acoustic urban environment. The researchers who were involved, worked with communities to identify the positive and negative components of their acoustic environment. Subsequently, they developed terminology for the expression of auditory appreciation of particular sound environments; showing that language and meaning play important roles in influencing how noise is considered in national contexts. Here, the project developed Schafer’s call for a positive approach to the soundscape through an engaged and analytical listening practice, while also seeking to undermine his rigid ideological hierarchies: building upon the pedagogical aspect of his work, at the expense of his moral claims (Thompson, 2017a).

Similarly, Peter Cusack's *Favourite Sounds* project looks to gather information on what people find positive about their everyday sound environment. Initiated in 1998, *Favourite Sounds* is one of the earliest collaborative soundmapping projects (Lappin & Ouzounian, 2015); and people were invited to record, share, and describe positive aspects of their everyday sound environments. This call provided a way to figure out how people who lived in those cities thought about their local soundscapes. Among other things, *Favourite Sounds* has been influential in inspiring the recent proliferation of online soundmaps, establishing a framework for producing collective ideas of soundscape, and suggesting approaches to urban sound that extend beyond noise pollution. Discussing his methodology, Cusack is interested in the different ways of sonically studying a city. A city is huge in area and it is impossible to study it as a whole; and even if there were this possibility, it would be extremely difficult to deduce some meaning out of this study. Rather, as Cusack marks, it is a question of splitting the city into "manageable, but sonically-relevant sized, pieces for research or for planning." This introduces the concept of "sonic place" as being understood to be "a locality in a city that is sonically coherent enough to be studied as such" (ibid). In this sense, the sonic city consists of many different sonic places; particularly when considering the relationship between how far the ear can hear and the physical layout of the place. The physical environment, of course, has a major impact on what is heard, but so does all of the human or natural activity that is occurring within it; which is what is actually creating the sound. The inclusion of a wide range of sounds, human and non-human, animal and machine, according to Thompson (2017, p.104) resulted in the expansion of aesthetic considerations of field recording practices; presenting urban sounds and soundscapes as pleasurable components of the city's sonic milieu.

Analogous to "sonic place" are the terms "soundscapes" or "sonoscapes;" used by Sémidor while conducting sound walks as a way to investigate the relationship between spatial arrangements and urban soundscape. Soundscapes are significant sound events that a sound walker can encounter during a half-hour walk (Sémidor, 2006, p.960),⁶⁵ which can inform urban planners in understanding the impacts of a particular architectural design on an overall soundscape. Sémidor (2006) applied the

⁶⁵ According to Sémidor, the 30-minute duration corresponds to the area, with a certain homogeneity concerning urban fabric or activities, covered on foot in an average European city.

sound walk method to evaluate what is considered pleasant in an urban sound environment, in relation to the activities undertaken in an area. She conducted sound walks during different times of the day, on several days of the week and recorded her sound walks with a binaural system (SEB) and a DAT recorder. In order to appreciate and evaluate the urban soundscape, photographs of the route and ethnographic notes, accompanied these recordings. Sémidor's approach of the sound walk as ethnographic practice, utilizes multi-media for the observation of the environment, with visual as well as sonic cues. The development of the sound walk as a tool to be deployed by urban planners, enables them, according to Venot and Sémidor, to "take the acoustic dimension of the site into account and to anticipate modifications accordingly" (Venot & Sémidor, 2006, p.1). They point out that "the nature of the urban fabric, the morphology of the public spaces, the texture of façade materials, [...] have great influence on the diffusion of sounds and thus on the auditory impression they produce" (ibid). However, in this case, it is the researcher(s) alone who are involved in the experience of space and the collection of data. As such, it is only their experience that is taken into consideration; and not that of the daily walkers/users of the area being investigated.

Other than architects and planners, psychologists have also utilized sound walks to make qualitative analyses of urban soundscapes. Berglund and Nilsson (2006) used soundwalks to develop tools for the classification of perceived quality of residential urban soundscapes. Their aim was to enable the planning of exciting soundscapes and to move beyond the characterization of sound as unwanted; emphasizing the symbiotic relationship between landscape and soundscape. Such a tool would make it possible to plan future exciting and/or restorative soundscapes in living environments, intended for healthy living, both indoors and outdoors. Residents of the investigated areas participated in structured listening walks after having taken part in a questionnaire study. Each walk lasted 90 minutes and the sound walkers listened at listening places for 30 seconds; binaural and monaural recordings were made simultaneously. Preliminary findings of the study showed that a 30-second listening period is essential for recalling and reporting on an immediate soundscape

perception; determining twelve descriptors during the sound walk.⁶⁶ As a result, Berglund and Nilsson found that this tool for measuring soundscape quality, is proficient for identification and classification of residential soundscapes.

Similarly, Adams et al (2006) also made use of the soundwalk to develop a method for engaging citizens in their research into sustainable urban environments. The case study area was Clerkenwell, London, and the research aimed to investigate the environmental quality of the 24-hour city. Participants were invited to identify a 10-minute walking route outside their houses and around the local area and to mark it on a map, with their home on the centre. This map was the basis for the soundwalk. Participants were asked to consider all their senses during the walk (smell, touch, and taste as well as hearing and seeing). The researcher who was walking together with the participant was responsible for the field recordings and for the photographic documentation of the investigated area. Participants were also asked to remain silent so that the microphone picked the urban sounds, while they remained focused on listening. The experience of the soundwalk was then used as the basis of a one-to-one (photo-aided) semi-structured interview with participants about their experience. The practice of sound walking with residents, was found to be an instructive way of enabling community collaboration with professionals working in the field of urban design and development.

By conducting soundwalks, Adams et al (2008) argue that audiences can have a shared sensory experience of the urban environments under investigation, thus enabling deep and post-walk conversations to take place. Walking through the city and listening to it with focused attention on what is being heard, is enabling a more far-reaching exploration of the responses made about spatiality, as well as the relationship between the built environment, the urban infrastructure, the design of the city, and its soundscapes. By routing the soundwalk through a variety of urban soundscapes, it is possible to open up listeners' ears to the different soundscapes in the urban environment, both the subtle and the obvious, effectively demonstrating to them that there are distinctions. This allows for engaging them in subsequent

⁶⁶ They developed an attribute-profiling tool to evaluate soundscape quality, both indoors and outdoors on a scale from 0 to 100%. The attributes were: soothing, pleasant, light, dull, eventful, exciting, stressful, hard, intrusive, annoying, noisy, and loud (Berglund and Nilsson, 2006)

discussion on what this means for urban design and planning in the future. Sound walks that are developed as art projects, can increasingly aspire to influence urban policy, as well as the views of decision-makers. The need for interdisciplinary research on soundscapes has been noted in all research projects discussed above, together with the need to deploy both quantitative and qualitative tools; simultaneously bringing together artistic, social, psychological, physical science, and built environment approaches.

In terms of “acoustemology” as described by Steven Feld, the kind of collaborative soundscaping practices such as those under discussion, are developed/ing as a “dialogic editing” of the sonic material. While conducting field research with Bosavi people in Papua New Guinea, Feld made field recordings in the rainforest as a way of being present. He walked to record the body’s tracing of space and then he played back his recordings to the Bosavi. This served as the methodological tool for getting feedback and conducting more recordings. He described this process as “dialogic editing” (Lane & Carlyle 2013). For Feld, field recordings are a critical mode of field method and representation. Dialogical editing aims not only to gather data, but also to initiate a conversation about what is going on in the world. What is listened to, how the Bosavi know and question the world by listening to it, how they edit and arrange its meanings as a composition. Through this method, people were engaged in the process; and over a 25-year period, Steven Feld has recorded 1000 different Bosavi songs that function as maps of the rainforest. Here, the LP *Voices of the Rainforest* acts as a connection between the dialogic field methodology of recording and the playing back of recordings. This experimental practice appears to provide a way of merging methods of dialogic editing with theories of sound as knowledge production; constructing what is known as anthropology of sound.

In a more recent work, *Walking in Nima* (2012), Feld explores the transitional auditory experience of walking, as a site for theorizing the emergence of auditory consciousness (Lane & Carlyle 2013). He developed a sound project where people around the world recorded a 5-10-minute piece of them walking in different places, which triggered conversations between “acoustic pen-pals” exchanging their walking experiences. *Walking in Nima* is promoting reflexivity, posing the question of how walking is related to the acoustic experience. Feld argues that art-making with field

recordings should take a more central role to anthropological thinking. For him, field recordings act as acoustic mirrors; they make audible, make public, circulate and amplify some aspects of what it means to listen in on social and sonic relations. For Born (2013), Feld's work is seminal for the development of a sonic-social phenomenology, in that it addresses music, sound, and their interrelations. In this broader framework of enquiry, he combines social phenomenology and hermeneutics of senses of place.

Informed by the Deleuzian notion of nomadism and rhizome and the Situationist *dérive*, Akoo-o use sound and mobility as vehicles of expression and social inquiry. They have been developing sound art works collaboratively drawing on their interest on sound, mapping, promenadology, the relation between the arts, technological mediation and the city. In 2014, *Listening to each other / Einander zuhören – Stadt – (Ge)Schichten* was a project that involved researchers, sound artists, art students and collectives of the city. The participants, among them members of Akoo-o, explored the relation between residents and their sonic environment by creating a series of soundwalks through workshops and creative collaborations. The result was an acoustic cartography about places, people and their mutual connections. The perception of space was transformed through the creation of an augmented aurality, while wandering within an aurally augmented city revealed inaudible soundscapes and personal narratives.

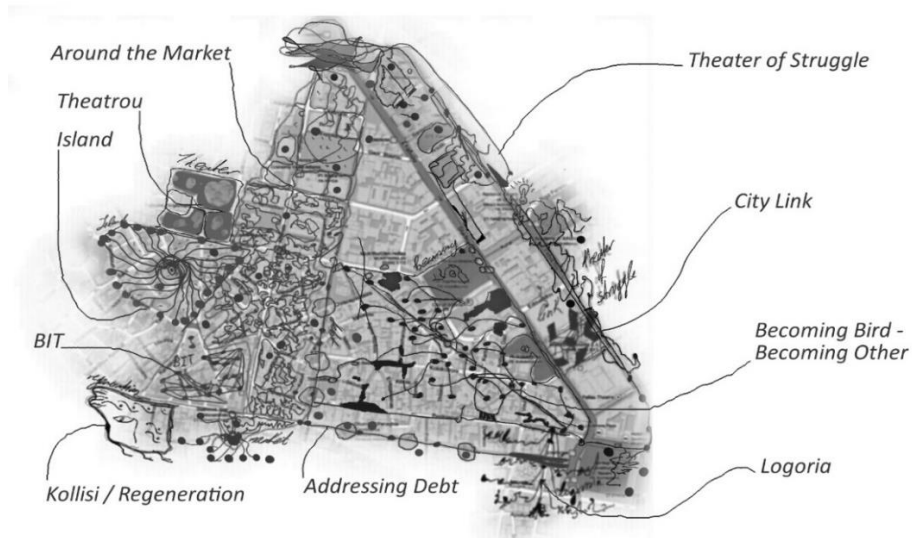


Figure 1 - *Einander zuhören – Stadt – (Ge)Schichten*

Resounding Cities (2015) was a collaborative project, part of the exhibition *Welcome to Ecumenopolis* which sought to explore the concept and practices of urban rituals and the ways in they are imprinted on the sensory scape of the city. The artistic result was a workshop, an audiowalk and a blog. The workshop was enhanced by the contribution of an international network of visual artists, musicians and social scientists who contributed with field recordings from various cities. The workshop was conducted in active correspondence and exchange between two parallel workshops in Lisbon and in Brussels. In order to exchange soundscapes and to actively discuss on the notion of urban rituals, Akoo-o designed a blog constantly renewed with audiovisual material and an interactive, audiovisual map which distant participants then contributed with sound and visual materials.

The soundwalk entitled *Dwelling Stories* (2015) resonates how Athens has functioned as a tourist attraction because of its "wonderful ruins". However, lately the interest in the city has widened for many different reasons. The current widening of the interest in cities has involved Akoo-o in the creation of a 'soundtrack' designed specifically for the area of the multiply significant garden of the Athens Archaeological Museum,

where this soundwalk is geo-located. It includes stories, narratives and impressions of non-native residents of Athens that travelled and lived in this city for a wide range of reasons. Their relationship with the specific place is built both through the original expectations and representations they had for Athens before arriving and through their daily experiences here.

Cracks on the Soundwalk, was commissioned by the organisers of the International Conference on Deleuze and Artistic Research DARE 2015 in Ghent.⁶⁷ I had the opportunity to follow Akoo-o to Ghent, and to participate in and observe the making of *Cracks on the soundwalk*. During the time that I spent with Akoo-o, we went for walks in the city of Ghent, organised field recording expeditions, spent much time writing, talking, thinking about, listening to and editing the sounds, photos, sketches and the experiences we had collected. The sounds recorded were combined and composed to a soundwalk available for download by all conference participants. Each person was encouraged to contribute with sounds, soundscapes, narratives and stories recorded during their stay or their voyage towards Ghent. The soundscape composition was changing daily as new sounds were added. The result was meant to be listened to while walking in the city of Ghent, inside and outside the conference venues or while walking from one conference venue to the other. The blog created for the walk was constantly renewed with sounds recorded in Ghent during the conference.

The *Utopia* project (2015), featured in *Cities and Memory*, takes one of English literature's great works of imagination, Thomas More's *Utopia* and creates something new from the collective imagination of artists around the world – an entirely new *Utopia* of sound. Contributing sound artists divided the woodcut map from the second printed edition of *Utopia* from 1518 into 30 grid squares, and each took a small section of the imagined country of *Utopia*, and created a new soundscape imagining how that place (and the society living in it) might sound. The map was divided into columns A to E vertically, and rows 1 to 6 horizontally, making a total of 30 grid squares. Most

⁶⁷ DARE 2015 conference reflected on the duality and openness inherent to artistic research <https://dareconferences.org/conference/dare2015/>

squares have interpretations by two different artists, and the interactive map above allows you to explore the sounds of Utopia freely.



Figure 2 – *Utopia: Cities and Memory*

The exhibition *With your Consent* (2016) constituted a project in progress that started with a series of events – workshops open to the public. Akoo-o conversed with the practices of surveillance through a sound installation that set the framework of a particular social contract, in order to manage the actions of people and things within it. A nexus of predefined designs diffused in the space in order to become an object of voluntary or involuntary processing of the participants in allocated roles. Silently, discretely, tangibly and deafeningly, the practices of surveillance impel the visitors to move within space, obeying to the contingent impact of their desires and choices. The exhibition also included workshops, performances and discussions, such as the DIY microphone-to-jewellery handcraft and recording practice workshop *Becoming*

invisible / “following?” : walking – hearing-sensing Spaces/Others: How to wiretap beloved or unknown persons’ conversations.

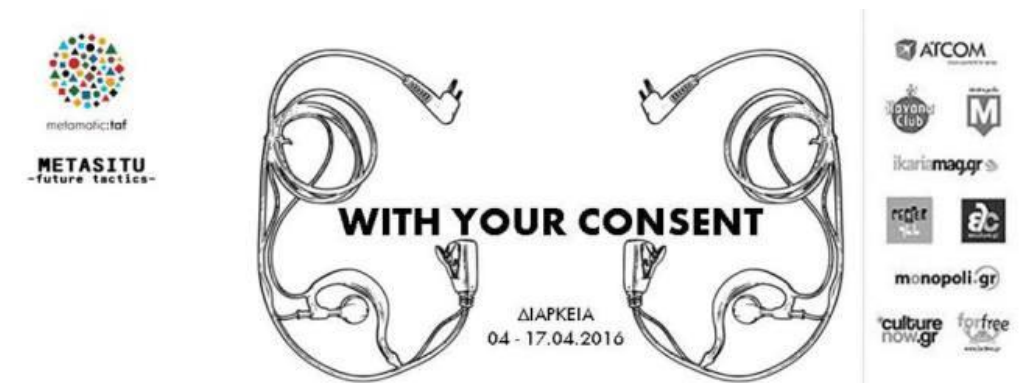


Figure 3 – *With your Consent*

One of Documenta 14’s strategies of “learning from Athens” was through movement – touring, walking and mapping– as well as through a move from Kassel to Athens. Based on practices of walking and mapping, Akoo-o organised a three-day workshop that engaged participants in a discussions and practices revolving around the ways Documenta 14 mapped and walked through the city of Athens. The *Walking and Mapping* (2017) workshop considered how we can walk and map the city after the exhibition was gone while having left all sorts of traces behind.

Terrains Vagues (2017), curated by Akoo-o, invited walkers to listen to the weaving of the contemporary urban landscape through its continuities and discontinuities, departing from the assumption that the very concept of the ruin is interwoven with urban exploration. The project consisted of soundwalks and workshops in public spaces of Athens, as well as screenings and a sound installation in the exhibition spaces of T.A.F. / The Art Foundation. With the coining of the term “terrains vagues” in the middle of the 90s, Spanish architect Ignasi de Solà-Morales (2013) referred to the existing urban voids, the empty “undefined” territories in the contemporary metropolis. These spaces – ruined industrial buildings, abandoned parking lots, obsolete commercial districts – can be approached as inactive terrains, fragmented and separated from the productive logic of the city; terrains that interrupt the continuity of the urban fabric, by generating a condition of awkwardness, uncertainty or disdain, an unfamiliar situation.

Spaces of Reflection workshop (2018) engaged with the sounds of the Mediation 10th Berlin Biennale. Akoo-o explored various listening techniques, such as ear cleaning exercises, descriptions of sound in sound diaries, listening walks, and discussions about silence and the ways of perceiving the aural identity of a space and the dominance of the visual into our lives. Akoo-o together with participants created DIY contact microphones to capture sounds from solids and a microphone for electromagnetic signals using a coil. Together, they recorded materials and electronic devices they found in the space and connected these recordings with sounds from the exhibition, so as to create a soundwalk that is geo-located outside KW Institute for Contemporary Art.

3.4.1 | Soundwalk/Soundmap: a method for understanding soundscapes

Today, mixed-method or multimodal ethnography is integrating physical and software field practices; and digitization of social and cultural life, has generated more data that can easily be geo-located with the use of GPS. In this, GPS bridges the gap between maps as representations of space and the physical experience in space; adding a perspectival and intersubjective layer (Hsu, 2012). Cartographic media and web-based mapping applications such as *Google Earth*, *OpenStreetMap*, *WorldMap*, etc. are changing the way people create, visualize, interpret and access geographical information. These applications are also widely used both for the qualitative and quantitative representation of the sound environment, because they allow for linkage between acoustic components and the space in which they are emitted. Soundmaps are a form of locative media that link a place with its sonic representation. Soundmapping roughly delineates a set of practices in which audio files are attached to geographic coordinates and displayed on online maps, often using *Google Maps* or *OpenStreetMap* as a cartographic base layer. These maps are enriched with the possibility to insert, on digital map support, various multimedia objects such as images, videos and sounds, precisely geo-localized. Soundmaps “allow us to directly hear a sound fragment, rather than being interpreted by a visual translation” (Signorelli, 2014) and generate alternative ways of exploring spaces. In addition, they reconsider the sonic dimension of anthropology’s impulse to textualize sound.

Hsu (2012) has argued that a deepened engagement with cultural content in sonic, visual and geographic registers, allows the researcher to recognize patterns of social

linkage and cultural meanings, and promotes sensory engagement with field materials, thus transforming ethnographic narrative and argumentation. Seen in this way, soundmaps are “thick maps” maps that “embody temporal and historical dynamics, through a multiplicity of layered narratives, sources and representational practices;” [they] are not simply “more data” on maps, but interrogations of the very possibility of data, mapping, and cartographic representational practices” (Presner, Shepard, & Kawano, 2014, pp.17-19). Thick maps can be understood as a mode of discovery within the context of social discourses, not unlike the notion of “thick description” popularized by Clifford Geertz (1994). Like thick descriptions, they are infinitely extensible and participatory; giving rise to forms of alternative mapping and having the potential to act as a personal mapping interview technology that encourages informants to offer place-based narratives. With thick maps, time can be added into space, allowing for the mapping of movement, while capturing human experience within a map; and tagging layers of information, enables people to create and re-create representations of places and to add meaning.

For mobile sound artworks, the creation of a hybrid listening space, adds a new layer of reality to place. The developer of the soundmap can leave messages, tell stories, create geolocated concerts or just share their thoughts. The result is a creative approach to cartography, which represents the experience of the place and creates a novel and enriching experience for all participants. Soundwalks and soundmaps offer new possibilities for artists to actively involve their audiences, which consists not only of experimental art aficionados, but also of everyday urban dwellers, thus affording a citizen-centred, bottom-up approach. Mobile sound artworks can be augmented by technologies, since people deploy media to extend or modify the sociable aspects of walking (Coyne, 2010, p.160); and this proliferation of mobile audio technologies has engendered a variety of *walking-with-sounds* projects, which span artistic practices, touristic and educational experiences, games and mobile applications. Walking sound artworks are calling the public to experience their cities through mobile bodies and sound. This mode of performance involves the listener-walker-participant as an active performer in the work, through a multi-sensory involvement that challenges prevailing apprehensions of meaning production and sense making, transforming them to a percipient.

What is clearly apparent within this context, is that we can use mobile and digital technologies to augment and interpret a sonic way of being in the world; and that the opportunities for collecting field data, sharing experiences and observing cultural practices, are vast. Indeed, in order to capture everyday practice in its full richness, there is a need for multimodal ways. Here Droumeva argues that “sensory postcards” are a form of “multimodal inquiry, which engage sensory ethnography as an access point into urban life, place and human geographies, as well as the power relations and models of situated learning” (Droumeva, 2015). This method unites practices from sensory ethnography and cultural studies toward questions around urban experience. The sensory ethnographer is interested in relationships between inhabitations, everyday practices, cultural formations, flows and movements; and uses mobile media and smart devices as vehicles for re-mediating the sensory experience (ibid). Smartphone applications for audio and visual capture, as well as environmental evaluations and cartographic representations, are used to “create snippets of sonic experience in a personal exploration of the everyday urban environment” (ibid), experienced through sound and movement. Connection between audio content and place, presents a new level of interactivity: place comes to provide a new means of interaction, while mobility operates as a way of navigating in walking sound art works.

Different applications (apps) have been developed for mobile devices, which facilitate capturing human experience within a map, designed to support educational field trips and “citizen science” projects.⁶⁸ These support the collection of images, audio, text and GPS tracks; and the resulting maps can be saved to the user device. With this tool for creating thick maps, time can be added into space and movement can be mapped; tagging layers of information. The maps that derive from the soundwalk produce multi-modal stories of places, and may contain visual, sonic and geographic data; creating digital archives with mobile technology. Using the smartphone as a tool for exploring place and everyday media production, soundwalks and soundmaps are a way of presenting field recordings in a spatialized way, which can be shared online

⁶⁸ The term citizen science indicates forms of participatory science and scientific activities in which non-experts and amateurs voluntarily and a-hierarchically cooperate with professional scientists to achieve community-oriented goals.

and provide feedback or be kept in a personal digital archive. As part of research projects, sound walking/mapping can be further deployed as narrative device; highlighting spatial emphasis and functioning as a personal mapping interview technology, which would encourage informants to offer place-based narratives. In such a context, the embodied relations afforded by digital media, as experienced in walking sound art works, can also be said to inspire an ethnography of embodied aurality. Sound walks/maps can communicate a sense of place in a way that is understandable to a majority of people; tagging layers of information and adding meaning to it. And now having set the contextual backdrop, this chapter moves on to discuss various mobile and experimental methodologies used in this research, in the section that follows.

3.5 | Experimental sound methodologies

The theme of my inquiry is the interrogation of the urban environment through the filter of the sonic, to explore the significance of sound in society. For this, during the course of this research, I have participated in and organised a variety of collaborative and creative research activities, so as to explore issues of collaboration and co-creation and the emergence of acoustic micro-communities within the transnational and transcultural context of an Institution such as the Edinburgh College of Art (ECA).⁶⁹ By inviting people to experience, document, and share their soundscapes within everyday listening practices, I attempted to gain insights to the research questions discussed in the introduction of this thesis, through ethnographically-informed experimental research. In terms of methodology, this research draws from para-ethnographic experimentation and the concept of the “para-site” or “third space” as has been suggested by George Marcus (2012).⁷⁰ In organising these activities, I set out to explore and critically examine the further potential, as well as the limits, of collaboration; mainly, how can we bring the idea of collaboration into a “third space.”

⁶⁹ Micro-communities (or, “wispy communities”), are defined as small but reoccurring forms of vocal/ expressive connection between people. The experience of feeling aversion while at the same time a sense of intrigue and curiosity, brings about a state of self-reflection, self-awareness; and from that comes a social positioning, awareness and consideration for others, a sense of togetherness from this sonically-induced double awareness (Taylor, 2017).

⁷⁰ George Marcus’s concept of para-ethnography (Holmes and Marcus 2008; Marcus 2010; 2012; 2013) was developed to capture the reflexive and intellectual practices in contemporary fieldwork contexts.

What are the stages of collaboration, how is interdisciplinary collaboration achieved, and what is the relationship between knowledge generated through collaboration and collective intelligence, experience and creativity?

In order to examine mobile sound practices that investigate relationships between people and places, I have not created a new mobile platform or application, but rather used readily available applications, since my intention has been to explore how already existing platforms can be used to reveal the manner in which people relate to places through sound and movement. Here, key junctures of this journey have marked by been my collaborations with the Akoo-o group and our concurrence in various sound walking/mapping projects. Akoo-o are a group of artists and researchers, based in Athens, that use sound and mobility as vehicles of expression and social inquiry. Departing from different fields, such as visual arts, cultural studies, musicology, and anthropology, they are sharing a common understanding of sound as a cultural material that transgresses the limits of their disciplines. Their work is based on research that includes the process of collaboration in their artistic practice. I have been following Akoo-o since 2014, shadowing them in various ventures they took part in, either as commissioned artists, or as a group working with participants in different settings.⁷¹ Another major point in this journey has been my collaboration with master's students from the Design and Digital Media and Sound Design programmes. I worked together with students in order to co-produce sound art works that deployed digital media technologies. Finally, as a *Thinker in Residence* for Scottish Graduate School for Arts and Humanities (SGSAH), I visited Deveron Projects in Huntly for a brief residency. There I engaged with, and was immersed in, the Deveron Projects' philosophy that "the town is the venue" and conducted a listening walk, inviting participants to use their senses, so as to map a popular scenic path of the area.

My collaborators, through creativity and collaboration were transformed into an artistic acoustic (micro)-community. Guided by insights from multi-sited, global and online ethnographic approaches, my fieldwork programme included both on- and offline interviews with members of the acoustic micro-communities under examination, as well as participant observation with all communities, extensive

⁷¹ See Appendix B, p.344 | Following the Akoo-o group

discussions that had the form of semi-structured interviews, (both walking and sedentary), and listening and walking sessions, accompanied by field recordings. My enquiry into the emergence and shaping of acoustic communities through collaborative and creative practices was ethnographic and as such it was “one mode of representation” among many (Bruner, 1986 cited in Travlou, 2014, p.247). It has been an on-going process, since I was a part of these communities, and should be seen as such.

3.5.1 | *The Impossible Inaudible Soundwalk*

The *Impossible Inaudible Soundwalk* workshop invited participants to question the conceptions of silence and noise, and to discuss the idea of urban voids and emptiness, through collaboration, application of innovative methodologies and the use of locative media.⁷² Participants were introduced to field recording techniques, during a field-based expedition of walking and listening and recording, in the form of a listening walk. The stages of the workshop included processing of sonic data in the lab; soundscape composition and sound design; as well as reproduction and sound composition upon the map of the city, to create a geo-located composition for a specific area. The outcome was a sound walk/map around George Square at the University of Edinburgh, which augmented the sensorial dimensions of the experience of the area for participants and listeners. As regards this case study, which is discussed in due course, I have deployed all the tools and methods that were extensively described and analysed in the first part of this chapter, either separately or combined in a methodological triangulation of participant observation, interviews and experimental phenomenology.

3.5.2 | SoundTag

Data Flâneurs was a student group formed between by master’s students in 2016, as part of the Digital Media Studio Project course (DMSP). My role has been to supervise students in their experimentations with computational and multimodal approaches to fieldwork and ethnographic representation (Talianni, 2016).⁷³ As their final

⁷² Chapter 3 | *The Impossible Inaudible Soundwalk*

⁷³ Data Flâneurs team: Caleb Abbott, Lewis Jones, Shuwen Ye, Shang Gao, Siyang Yu and Rong Wang.

project, the group developed a prototype web and mobile phone application (*SoundTag*) that simulated the experience of a soundwalk for users. The mobile application, accompanied by two site-specific sound walks, aimed to shift the focus from the visual to the aural, by inviting users to rethink their experience of place through social and playful sonic interactions. This listening experience was two-fold, since users were encouraged to experience the available soundwalks both indoors (i.e. the simulation on the computer/phone screen with the use of the application) and also soundwalk outdoors, in the 'real' space, with their mobile devices. The two sound designers of the group chose two short routes to augment sonically, close to Alison House/Nicolson Square, where the music department is located. The remaining four members of the group focused on the development of the web and mobile prototype application. Research and decisions were collaborative; based on the knowledge, time and resource restrictions of an educational student project.

3.5.3 | Exposing the Invisible City

Invisible Cities: Mapping the Invisible was a student group formed by masters' students in 2017, as part of the DMSP course.⁷⁴ My role has been to supervise students in their explorations of the constantly transforming notion of public space, through immersion in a hybrid environment between material and potential reality. The aim of this project was to understand the relationship between the city as it is usually shown and the invisible elements that fulfil the individual experience. As their final project, the group developed the audiovisual art installation *Exposing the Invisible City: a brain-driven audiovisual walk*. The installation was an attempt to detect the hidden aspects of urban life and to reveal something invisible, in this case, emotions, during a walk, in order to create an artistic representation of the interaction between the body and the urban environment.⁷⁵ To explore the relationship between emotions and the city, the group used an EEG - the abbreviation of Electroencephalography - headset to collect affective data from experiment subjects. Students measured the

⁷⁴ Group members were: Adrian Barahona Rios, Lara Estevez Fernandez, He Cui, Shuyuan Huang, Liangtian Chen, Fengshi Qin, and Bing Sun.

⁷⁵ Adrian, Lara, He and Shuyuan, presented a version of their work at the sIREN Conference 2017: Arts and Digital Practices and published a research paper on the same theme at the Aire Journal (Barahona Rios et al., 2018).

affective response of different experiment subjects while walking in a predefined route in the city centre of Edinburgh. The data was merged and analysed for the visualization and sonification of the walk, resulting in an audiovisual piece that links images and shapes to emotions and that translates the inaudible into the audible, in order to reinterpret the route.

3.5.4 | SGSAH Thinker Residency programme

In May 2017 I visited Deveron Projects in Huntly⁷⁶ as part of the SGSAH *Doctoral Thinker in Residence* programme.⁷⁷ My aim during this residency was to engage with and immerse myself in the *Deveron Projects*' philosophy of "the town is the venue;" thus exploring how collaborative and participatory artistic practices connect artists, communities and places, through creative and critical work. For this, I participated in the various events hosted by *Deveron Projects* during that period; and I was particularly interested in the walking practices that this community undertakes, which bring together walking with arts and other cultural disciplines. Walking is a common theme with my own research, and I approach it both as an artistic practice and a research tool. I also had the opportunity to engage in fruitful discussions with the *Deveron Projects* team, interns and the artist in residency, Manaf Halbouni. His artistic approach to cartography inspired me into rethinking soundmaps as tools to investigate the ways in which we experience, construct and share our relationship with place, and to consider how by applying vernacular cartographies, we can produce alternative readings of spaces.

Locals, artists, and staff at Deveron Projects meet every Friday for the Friday Lunch talk where usually the artist in residence will discuss their work. As invited resident I decided to take the Friday Lunch outside and 'make the town our venue.' I worked with Deveron Projects staff to make packed lunches and I asked them to send a list with requirements for the walk to interested participants. I advised that people should wear comfortable shoes and clothes and bring with them a device that they

⁷⁶ Deveron Projects is based in the rural market town of Huntly, Scotland, connecting artists, communities and places through creative research and engagement.

⁷⁷ Thinker in Residence is part of the residencies programme provided by SGSAH to support doctoral researchers in arts and humanities to spend one or two weeks with carefully selected partners to focus on a period of research and development in their PhD work.

could use to record any sounds, a camera, and a notepad. The outcome was that our Friday Lunch talk took the form of a listening walk. I instructed my fellow walkers to use their senses, with a focus on listening, in order to map the route.



Figure 4 - Listening walk with residents of the town of Huntly and the staff from Deveron Projects, 13/05/2017

During the walk I asked them to be silent and walk as fast or as slow as they wanted to, but to try to keep up with the group. The path itself was along a small river across the outskirts of the town. I also asked them to stop and make a recording, take a photo, or write down a thought if and when they felt like it. The walk ended at a small field next to the river, where we attempted to map our experiences of the walk by sharing our thoughts, recordings and other captured material to our discussion; creating a sort of mental map of the path, which was both intimate to each walker but also co-produced and collaborative.



Figure 5 - Friday lunch and post- listening walk reflection with residents of the town of Huntly and the staff from Deveron Projects, 13/05/2017

3.6 | The third space of collaboration

For the past two decades, collaboration has emerged as a keyword and an important methodological and ethical concern in various scientific disciplines. Collaboration was the theme of *The Biennial Meeting of the Society for Cultural Anthropology 2016* conference (Miyazaki, 2016): “From scientific laboratory research collaboration to collaboration among social movements and the sharing (or collaborative) economy, collaboration is a widely observed old and new phenomenon in the world, and recently, much ethnographic attention has been paid to many different forms of collaborative practice” raising interesting questions in relation to the critical examination of the instrumentality of collaboration. Anthropological research has always been collaborative in the sense that anthropologists have never worked alone. However, critiques of ethnographic fieldwork and representational practices have led to the further fundamental reframing of the relationship between researchers and research subjects as a commitment to co-producing anthropological knowledge and theory with research subjects. The reframing has resulted in various experimental engagements with para-ethnography or in ethnographic replications of expert knowledge forms.

The experimental practices I have discussed above draw on George Marcus’ concept of para-ethnography (Holmes and Marcus 2008; Marcus 2010; 2012; 2013) which

was developed to capture the reflexive and intellectual practices in contemporary fieldwork contexts. Marcus argues about “the appeal of alternative forms of articulating thinking, ideas, and concepts inside or alongside the challenge of situating and managing the fieldwork process— in “third spaces,” archives, studios, labs, “parasites” and the like” (Marcus, 2012, p.430). These third spaces are hybrids between the research report and the ethnographic research itself, an overlapping academic fieldwork space outside conventional notions of the field and fieldwork in contemporary ethnographic projects.

Using participant observation and interviews, I investigated the experiences of members of these acoustic communities and how they reflected on their experiences of place. This method took me into “unexpected trajectories in tracing a cultural formation across and within multiple sites of activity” (Marcus, 1995, p.96). The actual interviews, discussions, practice-based research and collaboration with my informants, sometimes led to somewhat different paths than were initially foreseen, but such unexpected ideas, feelings, and opinions expressed, all contributed substantially more to my research questions than I had initially expected. In the case of this research project, my ‘third space fieldwork’ have been the workshops I organized with students, either individually or as part of a course that I was tutoring, and my collaboration with Akoo-o. This methodological convergence found a fertile ground in the third space collaborations, focusing around public engagement and participatory research. Approaching the fieldwork as an artistic practice and as an effective method forgetting to know a region and its local people way of life, I set out to investigate the possibilities of sound art in public spaces. The anticipated outcome was to construct a creative research process where soundwalks and soundmaps are used to create collaborative sonic improvisations; in relation to a broader discourse on art, society, mobility and place. Now, the practices involved, are further outlined in the following chapter.

The continuous stream of mobile applications employed by the community of “prosumers” or “produsers” and researchers in their practices is facilitated by media

convergence.⁷⁸ Participatory media culture and mobile computing are contributing in everyday life ethnographies as a new form of media literacy and digital citizenship offering new models for researching and theorizing about urban everyday life. Sound artworks where spatial environments influence the physical experience bring prosumption processes in the creation of the artwork which according to Kim-Cohen can animate or restrain different kinds of social interaction (2009). The emergence of new kinds of art that make use of the mobile nature of media, allows a more dynamic understanding of the environment and a more active role within it. Sound walks/maps, at the intersection of these technological innovations, deal with the urban environment as a musical interface and employ mobile devices that offer new possibilities for artists to actively involve their audiences. Participation and co-operative actions in mobile sound artworks are essential; the audience is “producing” the work while being mobile - listening and recording - in public space.

These members of the listening publics are “prosumers” that comprise of creative audiences acting upon their experience. The term “creative user” is used by Lander (2011) for individuals that combine creativity with consumption in the artistic context: “A creative user is required to act upon an environment and/or other people, determine right action, proactively choose a path and make decisions consciously and knowledgeably” (p.163). Indeed, sound artworks that focus on process rather than the result, have led to a critical appreciation of their interactive manner, which invites the audience to engage actively in the course of creation, shifting them from observers to creative users. In many ways, this trend of participation in art, reflects the rise in the social and cultural use of digital technologies. Members of the listening public are

⁷⁸ The hybrid term “produser” refers to an individual who is engaged in the activity of “produsage,” deriving from production and usage. The term “prosumer”, as someone who is both producer and consumer, was coined by futurologist Alvin Toffler in his book entitled *The Third Wave*. Toffler defines prosumers as “people who produce some of the goods and services entering their own consumption” (1981). Prosumers are participants of a “peer-to-peer” participatory culture, being actively involved in cultural exchanges (Duncum, 2011, p.25). Jenkins defines participatory culture as “a culture with relatively low barriers to artistic expression and civic engagement and strong support for creating and sharing creations” where members are connected to each other and their contributions matter (Jenkins, 2009, p.xi). In participatory culture the focus is shifted from the individual to community, collaboration and engagement (Duncum, 2011, p.27). Functioning as actors of a participatory culture, means that we establish knowledge collaboratively and every person brings their own personal experiences; therefore, obtaining or attributing meanings becomes an interactive process.

considered actors who reflect their own meanings, tastes and values, either while navigating the urban space mediated by sound, or actively participating in the creation of a sound walk/map.

For Cole (2011), the concept of produser raises new questions about who belongs in the field and who makes the art; raising both ethical and political questions with regards to artistic presumption strategies. Co-creative practices, the fruit of a collaborative effort, challenge traditional notions of authorship and production in the arts and raise issues of power that become central in the arguments on the role audiences as prosumers.⁷⁹ When artists invite audiences to complete the artwork, participants take responsibility for its completion. In this sense, the artwork is immiscibly experimental and the audience is responsible for its aesthetic depth, its meaning, and its availability to other's experience of the art (Cubitt, 2007, p.1151).

Definitive of corporeal practices, such as soundwalking, is that they involve their audiences in kinaesthetic, dialogic, mobile and multi-sensory modes of knowing, communicating, and engaging with lived experience. Knowledge is produced and presented beyond the conventional boundaries, senses, roles and rules of the stages and pages of performance and discourse. Even though the experience can be solitary, this is not an isolated activity; soundwalks and soundmaps require direct communication and interactivity, through a collective production and exchange of knowledge. Therefore, the audiences of this genre or sound art are usually referred to as participants, experiencers or “percipients”. And all these terms are descriptive of the participatory nature of collaborative artistic practices in the context of contemporary arts and media. The term “participant” denotes the active engagement in the production of the work, and I use it to show that the act of participation forms a key part of my argument; while doing so as a way of conveying the specificity of that

⁷⁹ We can identify two main strands among researchers: Some view the increasing power of audiences (McNamara, 2011; Napoli, 2011) in creating and distributing content as a positive outcome of digital media. On the other hand, scholars echoing the views of Horkheimer and Adorno, who posit that mass culture is imposed on masses by capitalist institutions that have the power of controlling content, argue that this form of artistic creativity does not represent masses. These writers have insisted on the importance of “wider power structures” (Hay and Couldry, 2011, p.483) and note that there is little evidence of such a power shift (Couldry, 2011, pp.497-498). Finally, some are moving beyond utopia/dystopia dyads, beyond the dyad of optimism and pessimism and stress the need to explore the various kinds of power that are available to prosumers (McKee, 2013).

particular moment for the perceiving bodies. The term “experiencer” is more adequate in articulating the shape of the experience, and conveys a more immersive form of engagement, in the phenomenological sense of being in the world.⁸⁰

Yet, for the context of this research, the term “percipient” (Myers, 2011b) is more productive, as it encompasses all the characteristics of the aforementioned terms and adds the element of locality and situatedness. According to Myers, (2011b) the term percipient describes a mode of participation that is involved through mobile and dialogic exchanges, that can also describe the role of the artist/researcher. The percipient is “a person who perceives the world through their senses, [...] as a locus of place and knowledge production; and who alters and determines a process and its outcomes through their skilful, embodied and sensorial engagement” (p.191). This term then best describes the role of the soundwalk/soundmap participant as it is used in this thesis.

In taking this thinking further, the next chapter presents the case study of a soundwalking and soundmapping workshop, as well as the stages that led to an experimental, shared vernacular and collective soundmap, the *Impossible Inaudible Soundwalk*. By bringing together different collaborators such as researchers, students, artists, and locals, the workshop allowed for an acoustic micro-community to emerge. One that explored the relation of the body and the physical space, as well as the immaterial realms of conscious and sensory experience. By performing an auditory phenomenology, in the form of a sound walk/map workshop, my intention was to address the various challenges that arise when sonically mapping and representing a space and the experience of that space, as well as who maps and who gets represented. These included the ways of capturing the embodied listening experience and the dynamism of the sonic environment; the limits of sonic representation; the foregrounding of only a certain type of public in an attempt to challenge the idea of the sonic “tourist” of experience, whose experience becomes aestheticized” (Bull & Back, 2016, p.6).

⁸⁰ In line with Merleau-Ponty’s (1962) insight that the body is a medium for perception of the world and Deleuze and Guattari’s (1987) notion of “haptic space,” which denies opposition between the senses.

Chapter 4 | The *Impossible Inaudible Soundwalk*: Performing a Phenomenology in Sound.

4.1 | Introduction

In light of the discussions in Chapter 3, this chapter now considers the potential place-making power of the collective, distributed agency, as experienced in the *Impossible Inaudible Soundwalk* workshop; which is in this context understood as a piece of soundscape performance and of performative mapping. I examine what collaboration might afford in the performance space and the types of agency that are enabled by different kinds of collaborations, as well as the context from and way in which distributive agency might be drawn. Indeed, for the participants in the *Impossible Inaudible Soundwalk* workshop, sound was the tool that allowed for collective co-authorship of their soundscape; with an important feature for the percipients of the work being the capacity for a potential 'collectivity'. And while one can argue that mobile listening devices as such offer a fragmented experience (Bull, 2007), on the other hand, their collective use also provides a means and a reason for interconnection.⁸¹

Thus contextualised, for the *Impossible Inaudible Soundwalk* participants were invited to co-produce a walking sound art work through collaboration; taking the form of a soundmap of an area, which can be experienced on foot. The participatory processes this elicited, allowed for social expressions to be taken into account, while the sound design shaped the contributors' experiences of the everyday life and sound identity of their city. This work is thus perceived not only as an aesthetic installation or soundmap, but also as agential, in the sense that it may be involved in the social and cultural development of the city. Here, the concepts of collaboration and creativity are applied to describe the shape of my experience with sound, and I use these as tools or theoretical objects, which guide my exploration of the role that sound and walking

⁸¹ Michael Bull describes personal stereos as "technologies of accompanied solitude [that] shrink[s] space into something manageable and habitable" (2004, p.177). Bull focuses on the privatising and colonising aspect of this technology, addressing its capacity to aestheticize experiences of space. Soundwalks do aestheticize particular spaces of the everyday, but this mode of cartographic performance has also the potential to "interanimate" (Basso, 1996) and shape space.

play in positioning listeners towards each other.⁸² In this chapter I describe the motives, stages and models of collaboration that took place during the various phases of the soundwalk workshop and post-workshop reflection, as well as the role of mobile audio and geolocation technologies in the creation of the experience. In particular, I consider how the use of technology expanded the phenomenological space in which the soundwalk happens, as well as the sensory modes of audience perception of the space.

The outcome of the *Impossible Inaudible Soundwalk* workshop is a performative soundmap that made use of sound's "embodying power to produce bodies, to manipulate itself into an object, and to occupy space" (Myers, 2011, p.75). Indeed, my aim here is to show that in the space of this workshop an acoustic micro-community was ultimately produced; and that this occurred through encounters and participatory processes including both conflict and collaboration. To do so, I explore conceptions of materiality, digital and locative media, sonic design, and the experiencing of place through sound and walking.

4.2 | The Impossible Inaudible Soundwalk workshop

Innovative Learning Week (ILW) is a mid-term period during which timetables are suspended for the whole University, enabling students to develop new skills. During ILW 2016 at the University of Edinburgh, I organised a soundwalking and soundmapping workshop, taking the form of a collaborative experiment in cooperation with the artist group Akoo-o.⁸³ In the conception of the *Impossible Inaudible Soundwalk* workshop, I collaborated with Akoo-o with whom I have undertaken fieldwork in the past; and the preparation process was built upon my ethnographically informed research and fieldwork with Akoo-o. This occurred both in physical locations, i.e. by participant observation in other soundwalking projects

⁸² The combination of practices of walking with those of listening, affords a particular way of knowing space that situates or contextualises the audience in the visual and imaginary space involved in the experience (Myers, 2011, p.70).

⁸³ This project was funded by the UoE: ILW 2016 and the *Urban Emptiness* group. It was advertised all over the University and outside through mailing lists, social media, posters and word of mouth. The soundwalk workshop was part of a bigger project, entitled *Silence, Narrative and the Intimacy of the City / A Workshop Symposium*.

they organised, and through online research.⁸⁴ Further to this, before planning the soundwalk workshop in Edinburgh, I conducted interviews with members of Akoo-o and was invited to participate in one of the acoustic ecology seminar workshop sessions they were running at TWIXTlab in Athens.⁸⁵ Now, in the three days of the Impossible Inaudible workshop, we invited participants, that were students, university staff, and locals, to discuss their listening experiences, to question the conceptions of silence and noise, and the idea of urban voids and urban emptiness.

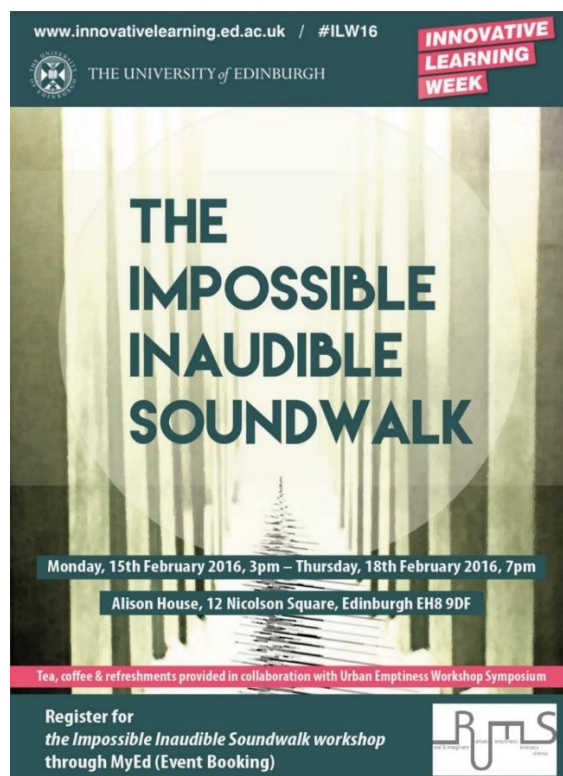


Figure 6 - The Impossible Inaudible Soundwalk poster that was used to recruit participants, February 2016

Thus, through collaboration, application of innovative methodologies and the use of locative media, we collectively produced an intervention of space with audio means; creatively embedding sounds we recorded, manipulated an edited, in response to our discussions concerning listening. Working collaboratively, we attempted a historical and aesthetic approach with regards both to walking and to the liminal spaces

⁸⁴ Online resources included Akoo-o webpage/blog, the blogs created for specific projects, the webpages of the institutions that were hosting those events and the press releases that advertised them.

⁸⁵ TWIXTlab, is situated between and betwixt contemporary art, anthropology and social reality proposes art and research projects, seminars, workshops, screenings, presentations, discussions etc.

between music, sound art and the study of soundscape. In this, partakers were introduced to field recording techniques during a field-based expedition of walking, listening, and recording, as part of a listening walk. This was followed by the processing of sonic data in the lab, which included soundscape composition and sound design, as well as reproduction and sound composition on the map of the city, in creating a geo-located piece for a specific area. Our goal was to create a soundmap of an area understood to be an urban void; composing a soundwalk that augments the sensorial dimensions of the experience of the city for listeners, using the *noTours* platform. *noTours* is an application for Android operating mobile devices that was created by the *escoitar* collective in Spain; the application allows the processing, or aural augmentation, of a specific area with sounds for the creation of series of soundwalks. *noTours* allows the navigation of a place through an augmented acoustic experience where the user/listener moves around in an environment of augmented aurality, connected with the actual space visited and the rhizomatic situation of the territory involved.

More than anything, the underpinning idea behind this workshop was that the creation of a site-specific sound art work in the form of a performative soundmap that it entailed, was a participatory and collaborative work, rather than as an example of individual artistic practice. To achieve this, we were all intimately involved in the processes of co-creating and designing a new concept of creative collaboration, which included not only artists/researchers but also participants from the student body and beyond. The participatory element of the workshop also extended through to the procedure of 'installing' the soundwalk, in broad discussions about our experience of place and the nature of sounds we selected to augment this experience. The participants included students from a range of programmes, including sound design, digital composition, architecture and visual anthropology as well as a small number of local people who are not students of the University.

The inspiration for this project was my interest in inquiring as to how our listening practices are shaped by today's technological developments; particularly given that sound and media art works such as installations, soundwalks and soundmaps that use geolocative media have influenced and contributed to the development of new modes of listening. I was also fascinated by the notion of sound(ing) art works seeking to

engage listeners, who themselves are navigating space to participate in the aesthetic completion of the piece. At the same time, there is the interesting universe of mobile listeners immersed in their privatised auditory bubble, described in Michael Bull's account of iPod culture (2007). And finally, I wanted to delve into the experience of the relationship between the aural and urban space, as detailed in Brandon LaBelle's essay *Acoustic Territories* on how sound circulates through the built environment (2010). Ultimately, these two key ideas - the privatized and intimate listening experience on the one hand, and the traces of a communal auditory life on the other - shaped the *Impossible Inaudible Soundwalk*.

The title, *Impossible Inaudible Soundwalk*, then was a reference allusion to Cage's aim of extending the field of artistic materiality to all the non-intentional sounds, by "shifting the production of music from the site of utterance to that of audition" (Kahn, 1999, p.157). The central idea of the workshop was to listen to the silence and to understand it in the way Voegelin describes it "not the absence of sound but the beginning of listening" (2010, p.83). In this, participants listened, recorded and mapped their field recordings and soundscape compositions, in the form of a soundwalk and soundmap, offering an alternative way to navigate a physical location. This resulted in the creation of a hybrid space that can be accessed through walking and listening; where percipients' relationships with the sounds were foregrounded, while their memories, routes and routines were made audible. For the final product, which is available for downloading on any Android device, a series of composed audio and field recordings interweave with the walker's physical surroundings, and in so doing, give voice to the buildings, the streets and the people that traverse them. In the section that follows, the workshop process that led to this ultimate result, will be further outlined.

4.2.1 | The workshop

As stated at the outset of this chapter, the workshop itself extended over three days on 15, 16 & 18th February 2016. Participants were invited to attend lectures, presentations, performances and workshops during the whole week (15-19 February 2016). In terms of basic workshop outline, the programme on the first day focused on the introduction of the theory and methodology of soundwalks by the workshop organisers. This was done by taking a historical and aesthetic approach, both to

walking and to the limits between music, sound art and the study of soundscape. On the second day it was planned that participants would conduct a listening and field recording walk to capture the sounds of their interest. Then, in the last day of the workshop, after a free day to edit and compose their soundscapes, they would finally collaboratively compose and complete the piece on the map.

In the workshop's organization and design, we were also mindful of the fact that a soundwalk asserts a central place for the senses; and that key aspects of spatial perception are produced through the senses, echoing the trend toward what has been called a "sonic turn." In our case, these were the opportunities to engage with the city and its sounds, using walking, listening, and field recordings as tools. Indeed, these were used not only for exploring the urban space, but also the cultural spheres that are created within it, and the potential hidden, imperceptible and inaudible meanings to the experience of the city. Ultimately, these opportunities were viewed as the means for participants to formulate a sense of place; inspiring them to find their own itineraries in their city and to transform them into geo-located compositions. Through sonic design, participants were thus invited to produce a hybrid space by making incremental adjustments within this space. As already mentioned in this thesis, this is what Coyne terms as a "tuning of place" (2010), and by extension, the tuning of social relations; which in the case of this workshop, was achieved through a hands-on collaborative approach that invited percipients to explore their acoustic environment in an adventurous, playful and creative way.

Another overarching consideration was that soundwalks and soundmaps are essentially about the sonic experience of a place, while also presenting novel ways in which sound can be used both as an artistic and research tool. Here the work of Steven Feld comes to mind, who successfully portrayed what it is to perform anthropology in sound (Feld & Brenneis, 2004), unpacked notions of connecting sonic/acoustic form to social and historical meaning (Feld, 1994) and also addressed the potential role that an anthropological voice can have in acoustic ecology and soundscape studies (Feld, 1996). What is also so exciting about the soundwalking practice, is that it offers a chance to explore sounds that are not organized in the way that music is; being neither closed as a system, nor confined by something culturally restricted. Dana from Akoo-o puts it another way when saying:

“Well, to tell you the truth I don’t want the listener to enter this street vs conservatory dichotomy. So, what if I want them to feel it like music? I would want to evoke emotion, and music for me does this. Not elaborate notes, but the representation of the emotion. This is how I understand it. If what I do can represent or evoke emotion, I am ok; this is music for me” (research interview, 9/11/2015, Appendix A, p.284).

Collaboration was of course a central element in the making of the work, with all involved taking part in, and being part of, a common project. The core idea was thus that we would get together and create a soundwalk and soundmap that would concern and include us all. In that sense, this work developed as collaborative and communal; *“ours as well as yours”* (group conversation, 15/2/2016) in the words of Dana. Different types of thinking, devices and software therefore are used as tools, which participants would have the opportunity to use individually in their co-creation of a common project. One that according to Dana would be, *“both collectively and individually enjoyed; and available for anyone to listen to and use, any time”* (ibid).

The multiple tools and their interplay gave the project a sense of the constantly intertwined, starting with the concept: to engage into an interdisciplinary investigation of emptiness and silence in the city of Edinburgh. Participants came from different backgrounds and disciplines, having lived all over the world, thus bringing their own ideas and meanings about the sonic construction of a city. In this, the aesthetic/artistic qualities of sound and its relationship with place, brought up conversations about noisy versus quiet spaces in Edinburgh; and our discussions revolved around different aspects of a place’s acoustic experience. For example, what does it mean for a person if a place is noisy or quiet; what kinds of sounds do they notice; how do people’s voices shape their experience; how do they sound; in what languages do they speak; and what do these people talk about? In other words, how do sound and noise shape and give meaning to the experience of a city? Here, the ideas that fuelled the debate on the role of noise in auditory and material culture, then developed into the outlines of the soundwalk and soundmap.



Figure 7 - The Impossible Inaudible Soundwalk workshop participants, 15/02/2016.

Coupled with the diversity of participants, of course was the array of tools offered by a multiplicity of available technology; from microphones, to recording devices and techniques, to fields of praxis and how a particular field might indicate the idea or the technique to be adopted. Also, the practice of editing and the software available to undertake it, provided a plethora of potential, both in terms of access (free, open source) and in terms of user friendliness. Finally, the platform *noTours*, both app and web editor, which would be used for installing the soundwalk and creating the sound map, gave the project its underlying technological framework.

With such technological tools at our disposal, we were also most mindful of the fact that sound recording and editing technologies can assist in highlighting sounds that cannot be heard inside the aural maze of the city, and that need amplification. From electromagnetic fields, to narratives and stories; these are sounds that would not be heard in other circumstances. The aim was thus to engage in a sort of acoustic fieldwork research; collecting these narratives for the ones to walk in our path in future, and learning to “listen with our legs” (Behrendt, 2015).⁸⁶ Walking and listening

⁸⁶ Behrendt (2015), drawing on a conversation between Maturana and von Förster where they contend that “we see with our legs,” takes this visual quote and translating it in the sonic realm argues that we can also “listen with our legs.”

are of course necessary steps in the production of the soundwalk; with walking as the tool for interaction with locative audio; as for everything to sound different “we have to listen, to observe, and to feel the walking movement. Together” (Stavrides, 2012, p.594). The body is then shaped by audible techniques; and in the context of the soundwalk workshop, through collaboration and participation also produces a body of knowledge; what Foucault termed the political technology of the body:

That is to say, there may be a “knowledge” of the body that is not exactly the science of its functioning, and a mastery of its forces that is more than the ability to conquer them: this knowledge and this mastery constitute what might be called the political technology of the body (Foucault, 1991, p.26).

In this sense then, we went on to consider what the ‘impossible inaudible’ is in relation to everyday experience, and to produce an embodied knowledge of the city. Depending on the tools and the collective decisions about the concept, it could be anything from abstract composition to the sound of wires, or perhaps an exploration of the relationship between field recordings and environmental awareness. In relation to the theme of technology, we approached mobile audio technology from two points of view: their assimilation to either maps or sounding. In the case of maps, we could project space and trajectory through schematic representation. In the case of sounding, we could activate the environment around us, and in so doing, collect information about it through feedback from the recordings and the post-editing discussions. Here, much of the ensuing discussion revolved around the aesthetical, cultural, social as well as philosophical issues arising from the development of recent mobile listening and sound-making devices, which allow us to record, transmit, mix, process and geo-localize sound on the move and in real-time. To connect it back to the practice of walking, in locative projects such as ours, walking was therefore considered as part of sonic interaction design.

Usually, a field-based expedition of walking, listening and sound recording in a selected area is needed, so as to gather sonic material to develop short sound stories for soundwalk experiences. Central to this are field recording techniques, soundscape composition and sound design. In our context, a listening walk was employed in order to experience and evaluate the soundscape: walking silently and actively listening, using our recording devices and headphones to become immersed in the soundscape and to notice certain sounds that otherwise may pass unnoticed.

After that, we could use our devices to listen to and capture the sounds around us. We experimented with different kinds of microphones (standard stereo, contact and directional microphones, binaurals, coils, hydrophones, and other DIY mics, etc.), together with sound recording devices such as Zoom H6 & Zoom H4N recorders, a Rycote Windshield/Jammer for wind-noise reduction, a Rode Boompole for location recording, and of course headphones. The silent walk resulted in a heightened awareness of our sonic environment, both external and internal. The instructions were to listen in every possible way to everything it was possible to hear. Pauline Oliveros, pioneer of experimental and post-war electronic art music, describes this “altered state of consciousness full of inner sounds” (Oliveros, 2005, p.xv) almost like “a form of meditation” (p.xxiv) as a “deep listening” practice.



Figure 8 - The Impossible Inaudible Soundwalk workshop: Preparing for the field recording expedition, 16/02/2016.

When talking about these types of listening experiences, each participant had much to say about how eye, or rather ear- opening this experience had been. Almost none of the participants had done a listening walk before. Among them, Participant 3 mentioned that he had this kind of experience before, but that when he had previously gone out for field recordings, he had always had his attention focused on the sound-in-itself as a material; as something that needed to be captured in order to be used in a composition or an installation (research interview, 22nd February 2016, Appendix A, p.284).



Figure 9 - The Impossible Inaudible Soundwalk workshop: Recording with a DIY hydrophone, 16/02/2016.

This sound-in-itself tendency seems to have become the dominant paradigm for the production and reception of sound art; and what some describe as being characteristic of the university-based avant-gardes, which were established through neoliberal transformations in universities (Born & Devine, 2015). As an antithesis, the listening walk was a type of rejection of sound-in-itself notion, in favour of a reading of sound's expanded situation and its uncontainable textuality (Kim-Cohen, 2009). This kind of "non-cochlear" sonic practice embraces the inevitable interaction of sound with the social, the linguistic, the philosophical, the political, and the technological (ibid).

Thus, by discovering a new way to listen, participants began thinking differently about the stories they wanted to tell. And they could choose between and blend multiple approaches to sound capturing, depending on the exact location within the Old Town they had decided to conduct field recordings and on the kind of device they were using. Ala Schaffer, participants took different paths looking for interesting nature sounds in the park, or for a hi-fi soundscape (Schaffer, 1977). Some directed

their microphones towards a bird flying or the rustling of leaves; some followed the train lines and tried to capture the vibrations of the trains passing by sticking their contact microphones on metallic surfaces; and some captured the echoing of the organ both inside and outside of a church. Others used the coil microphone in order to capture the fascinating yet strange sounds - the ubiquitous waves and magnetic fields present in the urban environment, the electromagnetic sounds of the location.



Figure 10 - The Impossible Inaudible Soundwalk workshop: Recording the soundscape with a Zoom recorder, 16/02/2016.

The discussions following the listening session about the captured material mainly focused on the field-recording trip, especially since the listening walk and recording session took place during an extremely windy day. So, percipients mostly exchanged their experiences of the spaces they chose to record, what kinds of problems they faced, how they dealt with them and so on. Even before listening to the recordings, the issue of wind as noise was prominent in all their accounts. From a phenomenological point of view, it seemed impossible to treat this sonic experience in isolation. The consensus was that they would consider wind as their invisible companion, a constant presence. This idea resulted in a wind noise composition; yet, participants did not understand themselves as sonic journalists or “audio-naturalists” interested in producing a “sonic naturalism” (Seta, 2018). Instead of investigating the nature of sound itself, they operated against sonic naturalism; exploring sounds and noises in their specific cultural and social context. Participants contemplated on the

recorded material and how this could be edited into meaningful compositions, as well as about possible locations where the soundwalk would be installed and geolocated.

We employed a bottom-up approach and worked collaboratively in all stages of the soundmap and soundwalk production. This required listening again to everyone's compositions and soundscape contributions: participants were keen to share with their peers; particularly in discussions on compositional strategies, the kinds of sounds they decided to include and how they had manipulated them. Akoo-o had not given any specific instructions on how to edit the sounds; and in terms of the aesthetic result, the idea that informed our practices in designing and organising the *Impossible Inaudible Soundwalk* workshop, as always was that of collective creativity. While we were listening to all the compositions, we started brainstorming about possible locations to install the soundwalk. Someone suggested the actual location where the recordings were captured, but the majority turned down this idea for practical reasons: the location was quite far from the campus and participants wanted to try the soundwalk as soon as possible.



Figure 11 - *The Impossible Inaudible Soundwalk* workshop: composing together 18/02/2016

Another reason was that it would be “*too obvious*” to attribute the sounds to their respective locations (group discussion, 18th September 2016). Such audio-naturalist practice, taking the form of sound journalism, is characteristic of the dominant sonic

naturalism, prevalent in sound studies.⁸⁷ The concept of soundscape as developed by Schaffer, promotes a naturalistic thinking about sound; however, the soundscape compositions critically reassessed the subject-object relation in sound. Goh criticizes Cox's sonic philosophy/ontology, which insists in thinking of as sound-in-itself or sonic matter as reaffirming a kind of posthuman sonic naturalism, by perpetuating the division between language and matter (2017, p.287). As presented above, the aim of our workshop was to translate instead of presenting our experience of the city into a communal sound work. Thus, the composition upon the map that started to form, carried many stories, memories and meanings from everyday life and places experienced. The aim of the project - the creation of the soundmap of an area that is understood as an urban void - also informed the geo-location strategies: the area around the university campus was selected for the installation of the soundwalk, because of the overwhelming presence of university sounds that take up the space of the city centre and overwhelm others.

In terms of creation process, while the first stage of the sonic composition was primarily an individual act, (each participant working on their own, with their headphones and choice of microphones, walking around the specific areas they chose to record), it was then followed by a group listening session. All participants were given opportunity to listen to what others recorded, in the same or in different areas, with different equipment and at different times, which thus rendered it a collaborative co-creative act. After the sonic material had been collected and recorded during the previous stages, participants working on their own computer, in their own time, attributed to the sounds the qualities that expressed their individual goals. At the same time, they exchanged ideas, and indeed by helping each other in the editing process, they developed group problem-solving skills.

The final stage of the production was then ultimately collaborative. After listening carefully to all the compositions, we attempted to decide on a route that would be both visually and sonically engaging, in creating this hybrid experience. Since most of the participants were students, they decided to sonically invest in their various routes

⁸⁷ This is particularly evident in a great variety of soundmaps and will be discussed in the following chapter.

around the campus, such as the Main Library, George Square and all places that carried specific meanings for them. When dealing with the composition process itself, the addition of an extra layer of sound displaced environmental sound through musical/sonic information networks, which deliver the idea of the other place and its inherent difference to the here and now; serving “as a live intersection and sonorous overlap” (LaBelle, 2006, p.235).



Figure 12 - Mapping the Impossible Inaudible Soundwalk, 18/02-2016

From what has been described thus far, we can therefore now clearly identify three stages in the sound map compositional process; with the first being where discussions happen, and the ground is set for creative, collaborative, actions to take place. During second stage, the listening walk and field recordings take place. This is followed by a group listening session, where participants listen to the recorded material, exchange ideas about composition techniques and give feedback to each other. The third stage then is where participants compose the sounds on a map; arranging them according to the spatial requirements of the composition.

What has been described above can be considered as a model for similar soundscaping and soundmapping activities: During the first stage, discussion and the exchange of ideas and knowledge occur; and the socialities of music-sonic experience

are understood in reference to their wider ontology and ecology. In the second stage, technologies and materialities then more fully enter the frame; acknowledging “the spatiality both of sound’s technological mediation and of its social mediation in performance” (Born, 2013, p.14). Part of the group listening session is fostering a first encounter of experience exchange, which allows participants to reflect on what others have been recording; starting to imagine their compositions alongside the totality of sonic material. This is also when the actual composition happens: cleaning the noise out of the recordings, editing out any other unwanted sounds, selecting specific pitches to amplify, superimposing sounds, adding new sounds and the like. Finally comes the soundmap composition stage; the building of the augmented aurality experience, with different degrees and kinds of co-present and virtual socialities and spatialities. Together, these three stages ultimately lead to the co-creation of a representation of place; which in our case, is this city.

4.2.2 Sonic design of the city

In both metaphorical and actual ways, the processes that took place during the collaborative composing of the *Impossible Inaudible Soundwalk*, can be said to represent the city through sounds, or as Ouzounian has claimed, to “re-compose the city” (2013). The people who participated in this workshop understood and represented the city not as an object or collection of objects, but instead as a resonant idea that is co-created by, and shared among, its listeners. Participants in the workshop had the opportunity to experience and record their soundscape while on a field recording expedition. There they did not just record the environment, but their interactions with it as well, allowing them to be also creators of sounds. They actively tried rubbing, hitting, stroking surfaces, testing acoustic qualities of places in different ways. Participant 3 describes this feeling of authorship and of owning the space:

It is good that we have the opportunity to explore the different qualities, but I don’t know, should I be thinking in terms of a potential outside spectator, like someone who has been given, I guess that’s just the fantasy really, I mean I might show it to a friend of mine but other than that it is just for us so, I might not need to worry about that (research interview, 22nd February 2016, Appendix A, p.284).



Figure 13 - The Impossible Inaudible Soundwalk experience, 18/02/2016.

Through walking and immersing in the sounds, the city can be newly understood as a “collectively generated, unstable and unfixed, imagined and experienced, lived and living composition” (Ouzounian & Lappin, 2014, p.311). This means that the city may become a place where reflection and bodily action can occur; continuously both heard and sounded. A place where, when filtered through the dynamic matrix of sound, art and the physical, social, cultural and civic environment, sound art’s political potential emerges.⁸⁸

This form of “situated composition” (Thulin, 2014) uses locative audio to bring together and acknowledge the impact that social, material, virtual and digital elements have on each other and as co-composers of new sounds. It aims to bring attention to the ways in which sonic and social space are both composed and composing forces. Situated composition in our context also refers to new possibilities to carry out sound production in an unprecedented range of environments; now relatively easily accessible to people with widely varying levels of expertise, because of the growing availability and mobility of digital sound tools. Particularly so those made obtainable through mobile apps. Situated composition also operates as a conceptual approach, drawing attention to the conditions that inform sound practices; dealing with composition as the mixture of material - social, virtual, and digital elements – that act as co-composers of one another (ibid). This method blends

⁸⁸ See 7.3 on sound art’s political potentiality.

research and creative praxis, enabling a dynamic relationship between contextual, ephemeral and participatory practices, and socio-cultural processes, urban dynamics and the everyday sphere. It can also be understood as performative mapping; as an approach to explore the diverse meaning of public space and the feelings that are related to it.⁸⁹ This mapping sets in motion an understanding of the variety of emotions that can be felt in public places in the city and how public exposure is experienced differently. The soundwalk serves as interface to different ways of knowing; such as a theoretical/distant way (the predefined route that was made by the participants), followed by a more embodied/tacit way of knowing (being guided by the geolocated sounds). Using mobile devices, mapping can be performed collectively. This indicates the participatory quality of experimental or radical cartography; emphasising how it can be used as a tool for facilitating collective co-authorship on spaces, agency and appropriation. As a method therefore, which brings people together and that can contribute to new forms of civic engagement through the senses.

In *The Production of Space* Lefebvre understands “sense” as “an organ that perceives, a direction that may be conceived and a directly lived movement progressing towards the horizon” (1991, p.423). Sara Ahmed, in her book *Queer Phenomenology: Orientations, Objects, Others*, offers a thorough analysis of what it means to be oriented: oriented toward objects, ideas, cultures, and sexes. She discusses “the question of “the orientation” [...] as a phenomenological question” (2006, p.1) and invites us to think of bodies and spaces as orientated. She proposes “disorientation” as a counter to the ways that the lines of orientation direct bodies and spaces:

[d]isorientation involves failed orientations: bodies inhabit spaces that do not extend their shape or use objects that do not extend their reach. At this moment of failure, such objects ‘point’ somewhere else of they make what is “here” become strange (p.161).

Applying this to the workshop process, we are reminded of the idea of “taking lines for a walk” (Ingold, 2007b), where we are able to conceptualize artistic practice in terms of everyday common experience. Instead of the presence of a line drawn

⁸⁹ See Chapter 4 on soundmaps.

between subject and object, the way that the soundwalk is composed and performed, does not require the user to select a specific path or orientation. Instead, it asks the listener to become a sonic flâneuse and discover the available sounds. It is the sound that gives orientation to space, opening up different orientations or ways in which spatial perceptions come to matter. By experiencing the soundmap through walking, “[s]pace acquires “direction” through how bodies inhabit it, just as bodies acquire direction in this inhabitation” (Ahmed, 2006, p.12). Lines then are freed from the residues of a Cartesian divide “and need no longer be an arbitrator between reality and representation” (Gerlach, 2014, p.27). In light of Ahmed’s queering of phenomenology, *The Impossible Inaudible Soundwalk* disorients the lines of orientation by questioning the inevitability of such lines, and by proposing deviations to them. This form of sonic cartography shifts from being a ‘point’ or fixed location; moving instead to an encounter between people and places, and to the production of spaces of encounter.

Participants were engaged with using their field recordings and soundscape compositions as a way to reveal, overwrite and amplify the interference between mediated listening and the urban space. Field recordings were seen as both representational and performative; and in the words of Participant 3:

Sometimes I wish there wasn’t a separation, so you can mix the outside and inside sounds. The headphones afford this separation; you’re kind of looking through the window at the sounds outside (research interview, 22nd February 2016, Appendix A, p.284).

This experience can be understood as a process that breaks the auditory bubble (Bull, 2007), by challenging the boundaries between aesthetic and everyday experience. The opportunities to infiltrate the relationship between the walker and the city, which this augmented aurality affords, is paradoxically using headphones and private listening to intensify it.

Reflecting an Acoustic Ecology ethos, percipients viewed this as an embodied and situated way of participating in the environment. It was also useful as a tactic of perceptual re-orientation with respect to the prevalence of vision in everyday experience (Westerkamp, 1974) by assigning their soundscape compositions to specific locations on the map. The processing of sonic data and sound composition on

the map, then can be described as a creative and experimental approach to cartography, compared to the traditional gridded representation of sound on the map. Also, by employing a bottom-up approach and working collaboratively in all stages of sound map and soundwalk production, the collective outcome itself expanded the boundaries of the soundmaps. This is so, both in the sense that we mapped the relationship between sound and space, and that we succeeded in communicating the often overlooked or ignored empty spaces. And that we did so by deploying field recordings and soundscape compositions as a mediated way of experiencing urban space, with an intention to listen again, critically. Therefore, the final product was a map of listening rather than a map of sounds, while the percipients formed an inclusive, sonically egalitarian, acoustic micro-community.

Moving on I will now describe my experience of the soundwalk space with various percipients who did not participate in the original workshop. These walks have taken place several months after the completion of the workshop and the development to the sound walk/map.⁹⁰ I invited people who were not part of the original group and had no prior experience with sound to investigate the area where the *Impossible Inaudible Soundwalk* was installed; these were mostly friends and colleagues outside Edinburgh College of Art. In the description that follows, information and comments from the workshop's original participants are interwoven in the text to provide context. Ihde (2007) argues that the description of the shape of the experience has the potential to expose the fixed structures that forge human experience, beyond culture, race, gender, or class; at the level of perception. The subsequent section attempts to follow this tradition and apply a phenomenological reading to my experience of the *Impossible Inaudible Soundwalk*. By giving voice to my lived experience I aim to describe the shape of the experience for myself that stretches beyond accurate descriptions and authentic observations. And in doing so, I will attempt to unveil what this experience has been for the others, at least on a perceptual level.

⁹⁰ See Appendix A.

4.3 | A phenomenological reading of the *Impossible Inaudible Soundwalk*

With headphones firmly covering our ears and mobile devices in hand, we are prepared for the sonic journey to begin. The prospective soundwalkers are confirming their status and position through the physical and visual presence of the mobile audio devices fixed on their bodies. This visual presence affirms a collective feeling of expectation for an audio cue or any acoustic stimuli to occur. In the moments prior to the start of the audio broadcasting of the soundscape compositions, there is a discernible expression of contemplation. Such feelings of expectation are evident in the looks of concern that one's device is not working properly. Some experiencers are looking at the devices of those next to them or asking them to use their headphones to check what they are experiencing. As it is common when it comes to our interactions with technology, especially one that is so familiar and ubiquitously present in our everyday life, we assume that it will function flawlessly. The result is that when one got 'lost' outside the soundwalk space, or when GPS failed, you could notice the appearance of a collective anxiety, or even frustration; its failing to meet our expectations. Then, once percipients discover that the sound is working again, or when they navigate back in the performance space, this collective expression of concern transforms into nods and gestures of satisfaction and the exchange of appeased, yet sometimes awkward, smiles.

From the first few steps inside the soundscape space I could feel a renewed experience of co-presence while performing the soundwalk with others, what one would describe as double experience. While I was sharing the space with fellow percipients and felt a part of this group, I was also in charge of my own experience; independent from others, as it was my own body's movements and particular choices activating the audio content. On the one hand, was the sense of being part of this collective group of people walking from one circle to the next, sharing in the multi-sensory experience of the space. On the other hand, one felt free to break away from the group and then re-join at a time of their own choosing, empowered to break away from the group and forge your own path. While experiencing the soundwalk, the interrelation between space and time is situated at the core of our embodied experience of sound. This mutual mode of experience - shared co-presence, interests and embodied interaction - was inherently affective and generated a "sounded

imbrication of bodies and environment” (Born, 2013, pp.8-9), in a way that was transformative of our subjective impressions and expressions. Fortunately, the geolocation technology of locative audio media affords a sense of flux among percipients, the environment and the mobile audio technology, thus enabling the potential for distributed agency, situated knowledge, and embodied relations to arise, what Taylor (2017) has termed as “sonic performativity”. For us, these affordances were enhanced by the triptych of “moving, thinking, feeling” (Stern, 2013) that provided the framework for the “implicit” body’s potential to grasp the aesthetic complexity of such multi-modal sensorial experience.⁹¹

Here for example, the sonic performativity of the audio technology depends on the GPS technology, the weather, the stability of the *noTours* app, and each body’s position within the soundwalk space. There may be instances of satellite data taking some time to reach the app, or it could fail on a cloudy day, or the experiencer might wander outside the area the soundwalk is installed for, if they do not check with the map on the device screen. In such a malaise, the sound system incurs each user with the feeling of a personal sonic journey. Indeed, because the app allows for the recognition of the geo-location of each user and picks up the appropriate audio stream, percipients’ bodies guide the broadcasted audio sequence; as the audio plays according to their individual location.

⁹¹ See Stern’s (2013) contribution to the discourse on embodiment, performativity, and affect, in relation to digital interactive artworks.

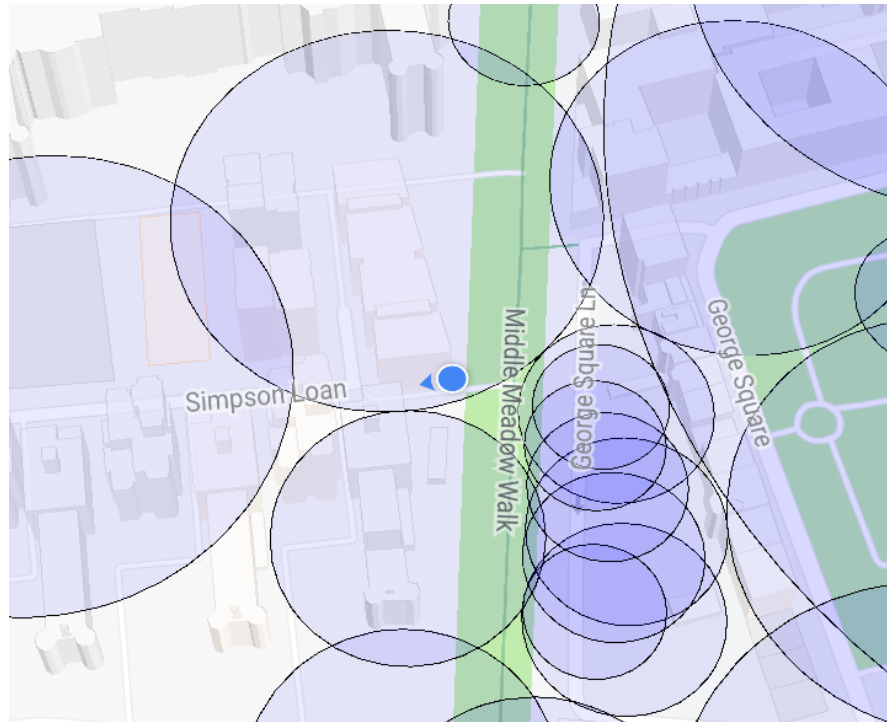


Figure 14 - The Impossible Inaudible Soundwalk map: overlapping soundscapes

Seen in this way, music and sound articulate spatial, socio-spatial and temporal boundaries in the performance space of the soundwalk; they play with the near and the far and enable an embodied understanding of active perception, of both temporal and spatial boundaries. This is contra Ihde's claim that, perceptually, such boundaries can only be temporal and not spatial: "Although I may be "immersed" in this "sphere" of sound, I cannot find its boundaries spatially. The spatial signification of a horizon is obscure" (2007, p.102). In our context, the *noTours* app interface, provided a visual representation of the sound's boundaries, because it depicts each composition as a circle on the soundmap, displayed on the device screen, as is shown below. Of course, circles can be overlapping, as are sounds.

4.3.1 | The soundmap

In terms of the route that the soundmap traverses, the starting point was the area around the Reid School of Music, including Nicolson Square. This was invested sonically with the *bagpipe_railtrack* piece; a composition typical of the soundscape one is immersed in when having arrived in the city. The field recordings used for this composition were recorded close to Waverley station, where you can usually find people playing the bagpipes; combined with recordings of various station announcements, the sounds of trains arriving and leaving, as well as people's voices

and footsteps. Participant 1 recorded this soundscape composition of a place of arrival and departure, and it was thus chosen by the group as the beginning of the created route, welcoming the listener to the journey, because the sounds involved not only created a listening starting point, but also constructed borders and boundaries (group conversation, 18th February 2016), as can be seen in Fig.15 below.

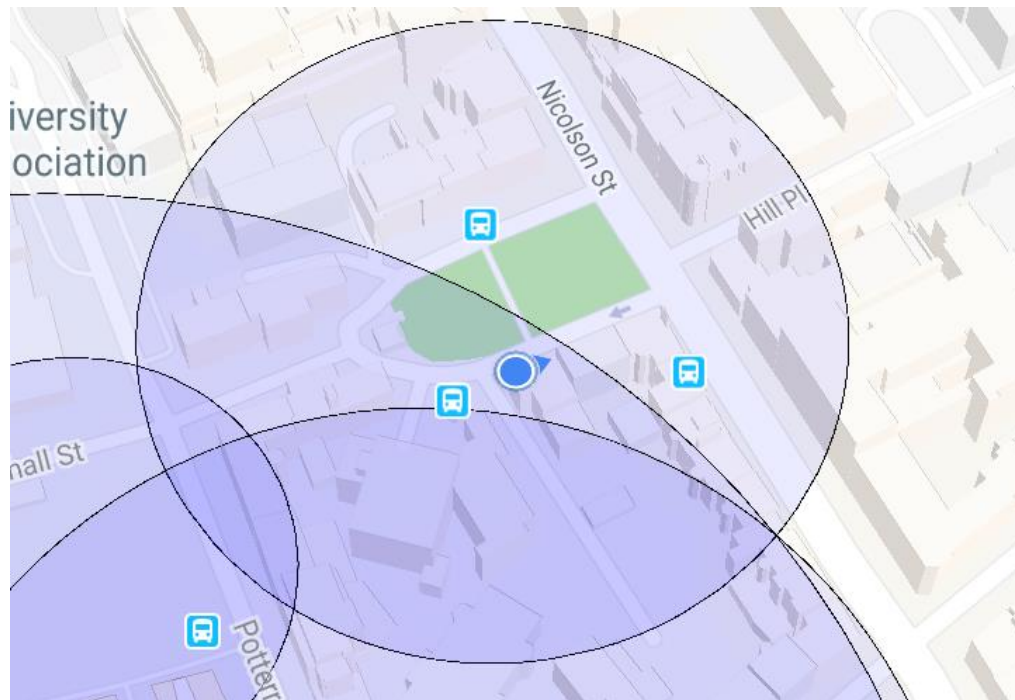


Figure 15 - The Impossible Inaudible Soundwalk map: bagpipe_railtrack sound composition

When then expanding the route further, the *brakes_birds* piece included Potterrow and Bristo Square. Here, the microphone follows a bus or another type of large vehicle, capturing its brake-noise; and when sounds of birds are introduced to the composition, the pitch and tone are almost identical. Here percipient 5 mentioned how they could hear the seagulls 'inside' the track, merging with the birds outside; noting how the external experience is mixed with the composition being heard through the headphones (informal conversation, 29th September 2017). Then, as the brakes are faded down and the sounds of the birds dominate, a siren is heard in the background. This sound is also at a similar pitch and provides an added layer to the composition that juxtaposes human-nature-human sounds; it is here where the hi/lo-fi soundscape merge and cohabit the space. In the background, traffic, wind, peoples' voices and the bagpiper are constantly present, connecting the listener to the previous composition and creating a sense of continuity of the actual and the compositional

space. The sounds used (a bus's brakes) transform a crossing to a place where the listener lingers; themselves 'braking' to listen.

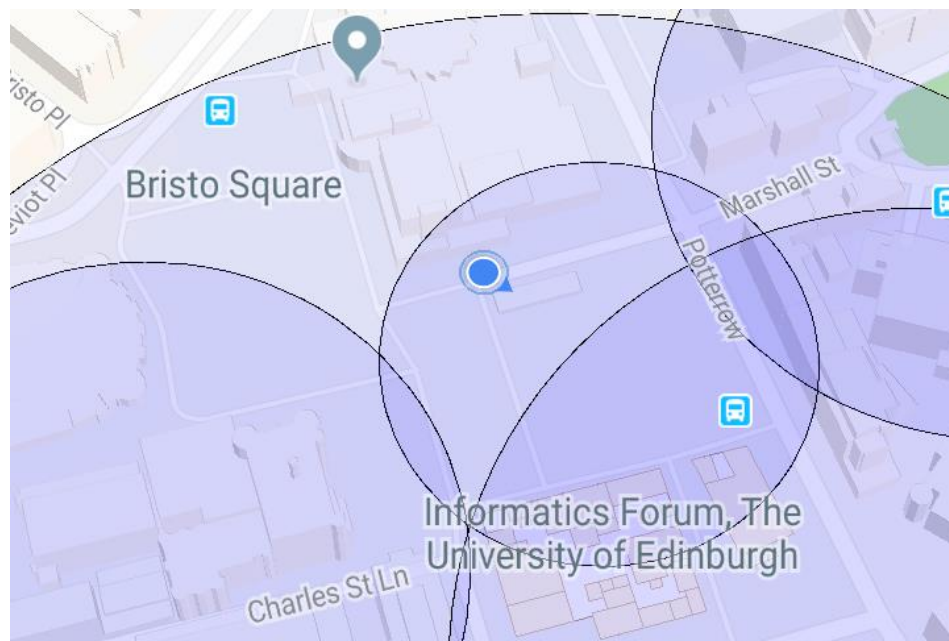


Figure 16 - The Impossible Inaudible Soundwalk map: brakes_birds sound composition

Moving on, if you choose to walk in the direction of Teviot Place, heading towards the Medical School and the top of the Middle Meadow Walk, a totally different acoustic experience awaits. Here *Singalong* begins with human voices, and after a few seconds, an upbeat pop song can be heard. The voices sing along, and some people laugh, while others whistle; and the quality of the song sound is not very good, almost as if blasted from an invisible boombox. There is a lot of noise in the recording and after a while the music becomes irrelevant. It continues to play in the background, but the voices in the recording now ignore it and you can listen to them continue their conversation, until finally the piece ends with the sounds of sirens. What was very interesting about this *Singalong* composition, was that it was an existing field recording in the archive of Participant 4, who related the story of its creation during the composition and geo-location stage of the soundwalk; stating that it was recorded at night time a few years ago in the same location, before explaining: She was strolling back home at the time, passing by the top of the Middle Meadow walk. There she saw a group of (homeless) people listening to music projected from a small boombox and singing along. During that period, she was doing some field recordings for a documentary she was preparing, and she didn't realise that she had left the microphone on while talking to

them. When she went back home, she forgot about this recording; but when signing up for the workshop, she revisited her archive, and after listening to it again, decided that she wanted to use it somehow (group conversation, 18th February 2016). When listening to this story, a few of us, still new in town, knew that the Quartermile area was recently ‘regenerated’. Now though, we had the opportunity to listen, and to feel and imagine, how it was, and how it sounded before. Indeed, the top of Middle Meadow walk before the refurbishment of the Quartermile area, was a spot for homeless people to gather. After the area was ‘regenerated’ they were evicted. So, on some level, our idea of attaching the recording to this circle, was that through it those people could in a way reclaim that space.

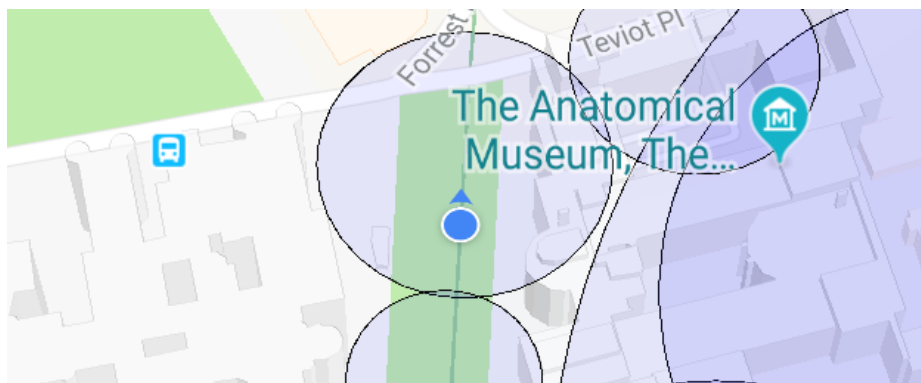


Figure 17 - The Impossible Inaudible Soundwalk map: Singalong sound composition

When continuing on and arriving at Quartermile, the piece *disturbances* was the composition chosen to invest that area. This is the most far-flung space in the walk and the composition is the only piece that was used twice in the soundwalk. Here in this setting, the ‘harsh’ elements of the recording, which are a combination of environmental and electromagnetic sounds recorded on a handcrafted home-made microphone, almost serve as a reaction to the harsh and empty space. According to Percipient 3, it’s like it is telling you to go away:

This is like the farthest out space in the walk and psychologically it is like, it really does suit this space [...] I feel like here, the harsh elements of the recording are a reaction to the space. It is such an empty space, it so wants to be a plaza, it is a busy enough day; like there are people, but it is just, it is something, that square. It’s like [the] piece is telling you go away! (research interview, 22nd February 2016, Appendix A, p.284).

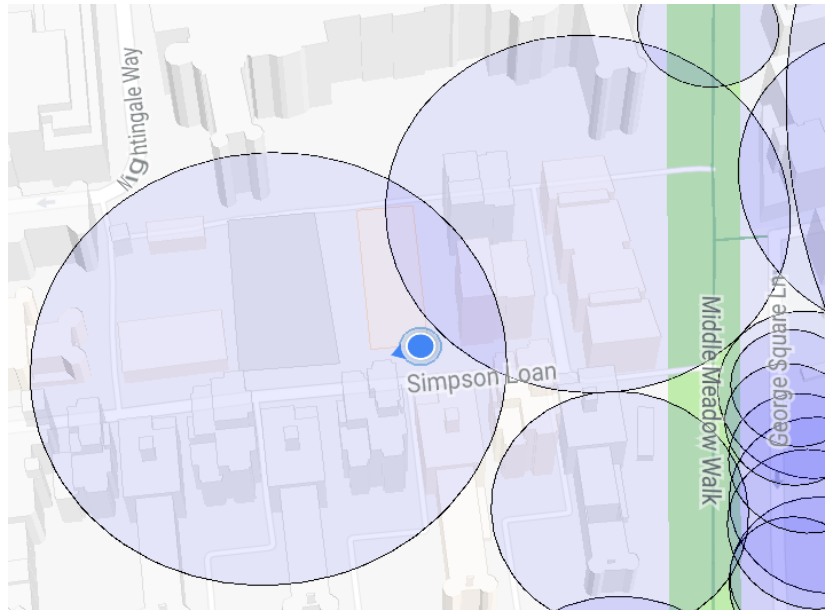


Figure 18 - *The Impossible Inaudible Soundwalk map: disturbances sound composition*

In another part of the walk, the area between Bristo Square and George Square Gardens is invested sonically with the *bells_manhole* composition. Here, by placing the microphone in a manhole close to the railway station during the recording, the train sounds obtained another quality. They are still distinct and recognisable, but it is as if you are listening to them under a bridge, or through a tunnel. At the same time, bell sounds dominate the composition, giving the listener a sense of vertical perception of space. You are almost inclined to look up to see the bells, but you can't. Acoustically they exist in another layer. At the same time, the sounds of the trains coming and going, as filtered through the microphone placed in the manhole, provide the rhythmic structure and a key element of the composition.

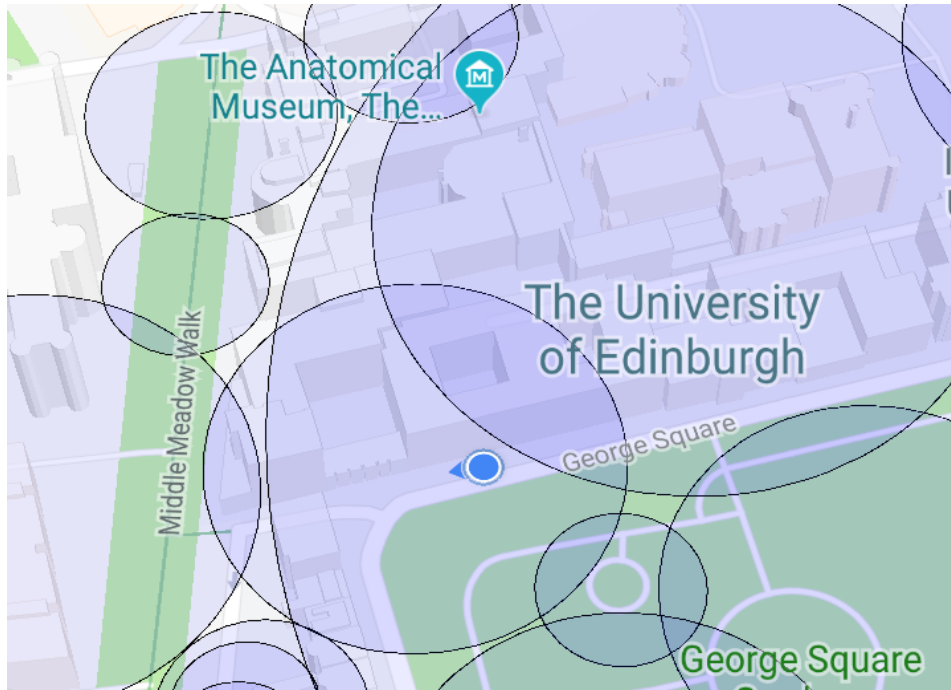


Figure 19 - The Impossible Inaudible Soundwalk map: bells_manhole sound composition

As part of the walk, when you enter George Square Gardens, you leave behind the urban sounds, traffic noises, sirens and brakes; becoming immersed in the *soundwalk_organ* composition. The composer of this piece is Participant 2, who had neither worked with field recordings in the past, nor experienced a soundwalk/listening walk around town, wearing headphones. She commented on how fascinated she was, because she could hear things in an entirely different way, totally unlike how she hears things at a recording studio. She chose the Princes Street Gardens as the space for her recordings to be experienced, as a way to get away from the traffic noises, but also because they are sonically very interesting (research interview, 25th February 2016, Appendix A, p.284). Much happens there all the time; and according to her, in terms of this aspect, the location was pretty good from the perspective of the theme, which sought to highlight authentic sounds of the city and what represents Edinburgh, both inside and outside the headphones. As for the recorded sounds themselves, they are a combination of recordings that were made indoors, in The Parish Church of St Cuthbert.

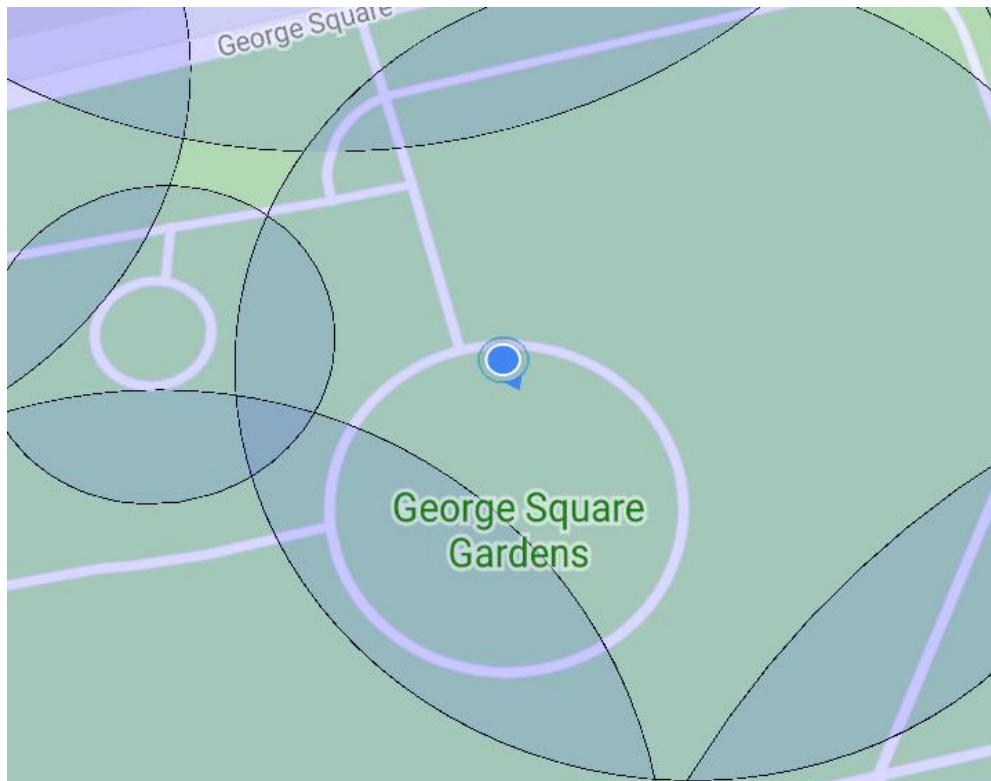


Figure 20 - The Impossible Inaudible Soundwalk map: soundwalk_organ sound composition

Here thus, while walking through the paths of the gardens, you can listen to a tour guide narrating the story of the church to tourists visiting it, as well as footsteps and people's voices. They all sound distant and distorted because of the extreme reverberation of the space, and in the background, traffic noises are heard, coming from the busy Princes Street. The microphone, however, also captures cracking wood noises, doors being slammed and the sound of bells. Then, as you move closer to the centre of the gardens, the imposing sound of the organ interrupts every other sound. Now the listener can choose to continue roaming the gardens or sit on one of the benches and listen to the organ.

Within the same locale, if you choose to go to the direction of the labyrinth, there you can be immersed in a totally different sonic experience. The piece chosen for this specific area is *disturbances*, which as stated earlier, is the only composition to be used twice in the soundwalk – a selection of environmental sounds mixed with electromagnetic recordings through a DIY coil microphone. This created an interesting juxtaposition, because the purpose of the maze is to be a place of quiet meditation, with the sonic disturbances of the piece almost enhancing this by urging you to follow the maze and to concentrate on your footsteps, as well as the weird or

disturbing sounds. According to Percipient 3, the composition features ‘sharp turns’ that create the experience of a labyrinth, ornamenting it with sonic twists. And through this composition’s repetition in the walk, the juxtapositions it creates also somehow defy time and space. When the same piece was used in the Quartermile area, the harsh elements in the sound recording and editing, reflect the harsh elements in the architecture i.e. in the empty space of Quartermile, the harsh elements of the recording are a reaction to the space. Within the labyrinth though, according to Participant 3, “*the labyrinth is telling you just stick to it, it’s not noise, it’s sound!*” (research interview, 22nd February 2016, Appendix A, p.284). Thus, whereas acoustic ecology has frequently framed noise as an ‘enemy’, this piece makes apparent the necessity and affectivity of noise. Signal and noise, foreground and background, event and context, are presented together; alluding to the notion that what is heard stems from the combination of sound source and its environment.

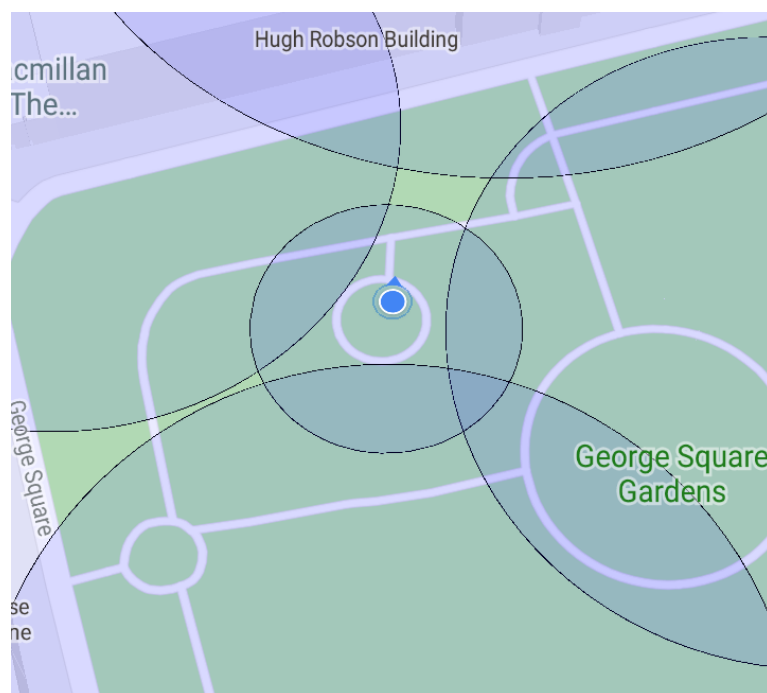


Figure 21 - *The Impossible Inaudible Soundwalk map: disturbances sound composition (labyrinth)*

Moving towards Buccleuch Place, the composition chosen to aurally augment the area is *wind*. Indeed, as stated previously, wind was constantly present during the field recordings; but it is also very much a keynote sound of the city. So, for this, one of the participants decided to use all the frequencies she edited out while ‘cleaning’ her field recordings, to create a wind composition. A key feature is that the noise at that point becomes disturbing, as it conceals the sound stories that still continue in the

background: birds singing, two people having a conversation and the sound of cars driving.

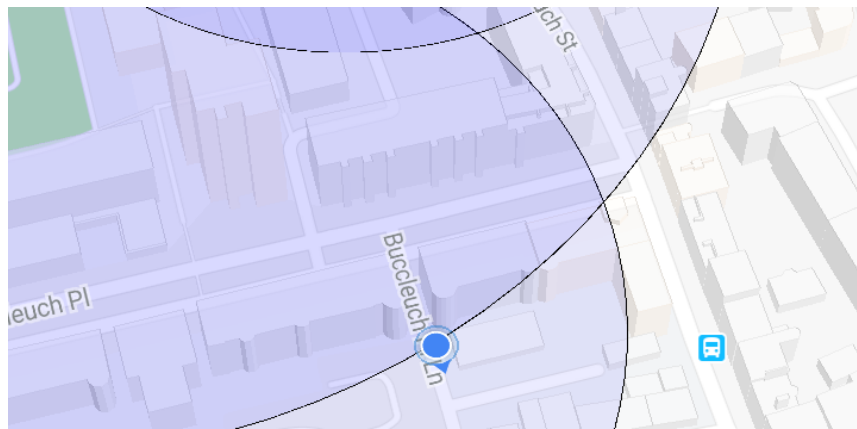


Figure 22 - The Impossible Inaudible Soundwalk map: wind sound composition

Now if you decide to head towards the library, a new piece announces itself with a squeak on the floor, sounding the space out; making you realize that you are in a different space. This is now the sonic world of the *gallery* composition, recorded in an indoors space; a combination of the sounds of people moving, footsteps, rumblings and human voices, mixed with electronic sounds. If you linger long enough on the edges of the circle, you will hear a female voice asking, '*does that do anything?*' – a question about the meaning of experience perhaps.

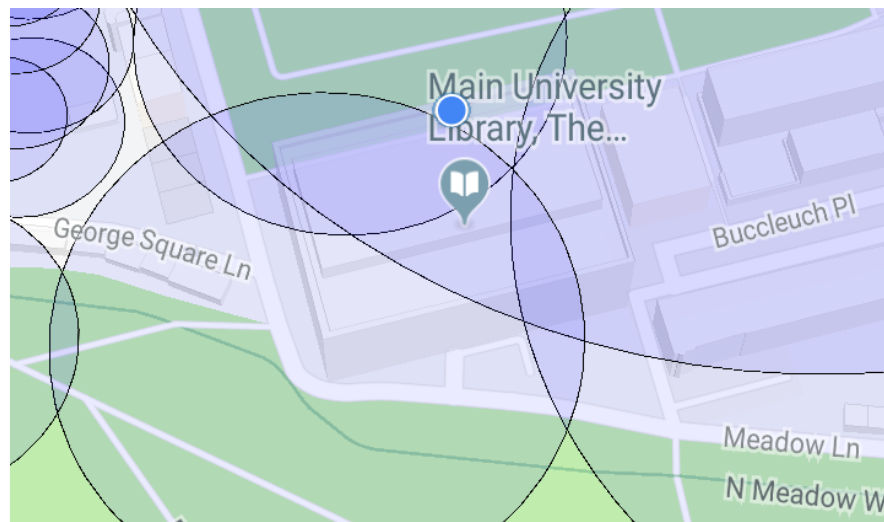


Figure 23 - The Impossible Inaudible Soundwalk map: gallery sound composition

Arriving at George Square Lane, the small lane beside middle meadow walk, the listener can then listen to a cluster of compositions entitled *ice*. These form an array of very small circles; with each circle including a short composition, based on a

recording with the hydrophone microphone placed in a small icy pond. The microphone captured the sound of the ice cracking; and as you descend the lane, the sounds become sort of more and more ‘water-y,’ as described by Percipient 6 who said, *“The small lane beside middle meadow walk with the ice cracking stuff, that was really interesting! As you were descending down that hill, it became more and more water-y, like you were walking close to a pond or something”* (group conversation, 29th September 2017). We chose this lane because even though it’s just there, right next to the middle meadow walk, it still feels like a secret space; and the sounds feel like they acknowledge it. This use of technology to uncover or revive hidden sounds, has a magical element for Dana from Akoo-o: *“Capturing sounds that die is like discovering something very imperceptible, like a secret.”* For Participant 3, it also features playful possibility:

The sonic composition can shape and define a secret space which is visible and invisible at the same time, like hiding behind a set of chairs. The idea of a secret sound that needs to be discovered or amplified (research interview, 22nd February 2016, Appendix A, p.284).

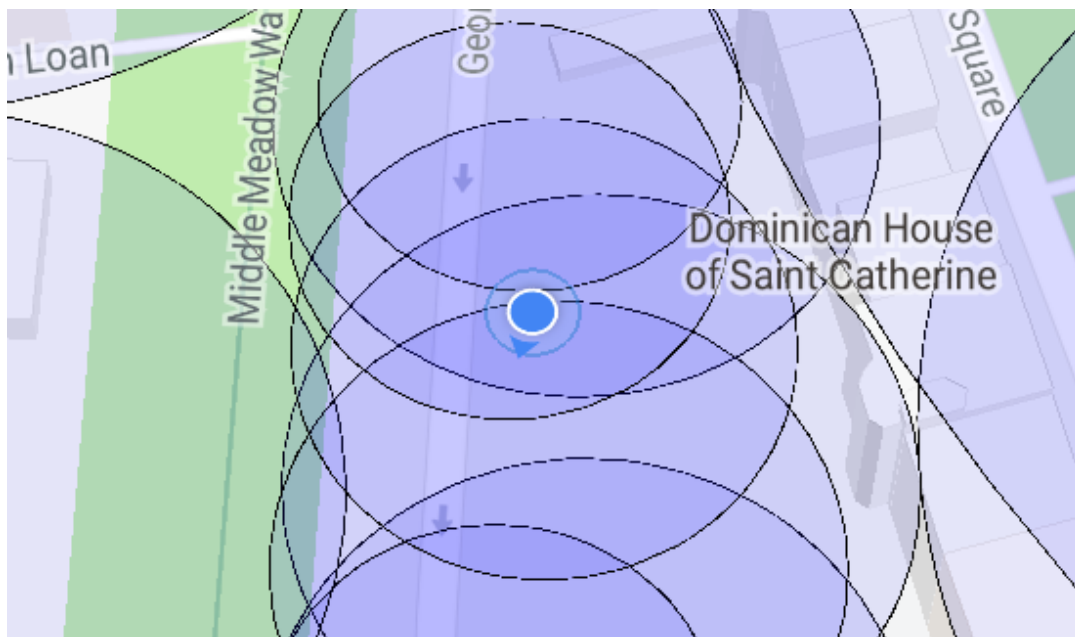


Figure 24 - The Impossible Inaudible Soundwalk map: ice sound compositions

Heading back to the Middle Meadow walk, a *drone* sound is used as a background filler electronic sound, particularly geared to facilitate movement. According to George from Akoo-o, they use these types of compositions, which are usually very calm and assertive pieces, to subtly inspire people into a walking rhythm; a very calm one that

does not at all compete with the voices and acts like a sonic carpet or frame for the narratives (research interview, 8th November 2015, Appendix A, p.284). Participant 3 describes these drone sounds as creating a feeling of emptiness. Indeed, as a drone specifically composed to give to the listener the sense that they are 'inside' the soundwalk, it perfectly prepares the listener for the two sound stories that unfold when you reach the Meadows.

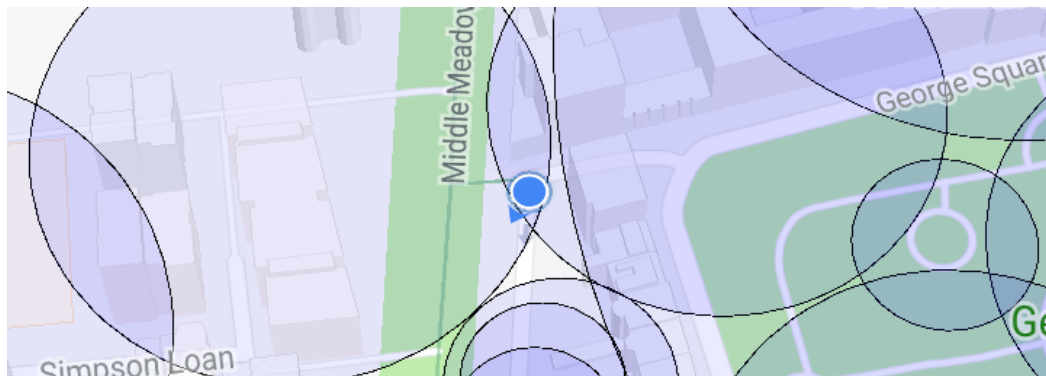


Figure 25 - The Impossible Inaudible Soundwalk map: drone sound composition

Two sonic tales meet at the bottom of the Middle Meadow Walk. If you choose to walk left, you will listen to *boy racer*, which follows the dance of a leaf in the wind, only to be interrupted by the noise of a fast car coming to your direction. It is a very disturbing experience, since the acoustic and visual information that you receive are clashing. Alternatively, if you choose to walk right, you will hear *kangaroos*, a short story about fast cars and loud music. In the composition, a particular discussion ends, and the roaring car comes by, which feels like someone suddenly added the sound; whereas, during the original field recording, the discussion was interrupted by the car. During the compositional stage, the recording was reversed, and the sound acts like a prophecy that the discussion ends with the car. But then you notice that when the car passes, they are still talking like they haven't heard it; creating a strange acoustic double-take in the listener. Then, if you walk too far, you might meet the background drone again, which in the words of Participant 3, who composed *boy racer* created fascinating intersectionality:

I came out of that zone of intersection and it is kind of empty, an area of waiting and then even that went, and it was just the drone, I is like we're gone from the emptiness, the organic emptiness of leaves, to just the drone and then suddenly from that to a rumble which also feels synthetic (research interview, 22nd February 2016, Appendix A, p.284).

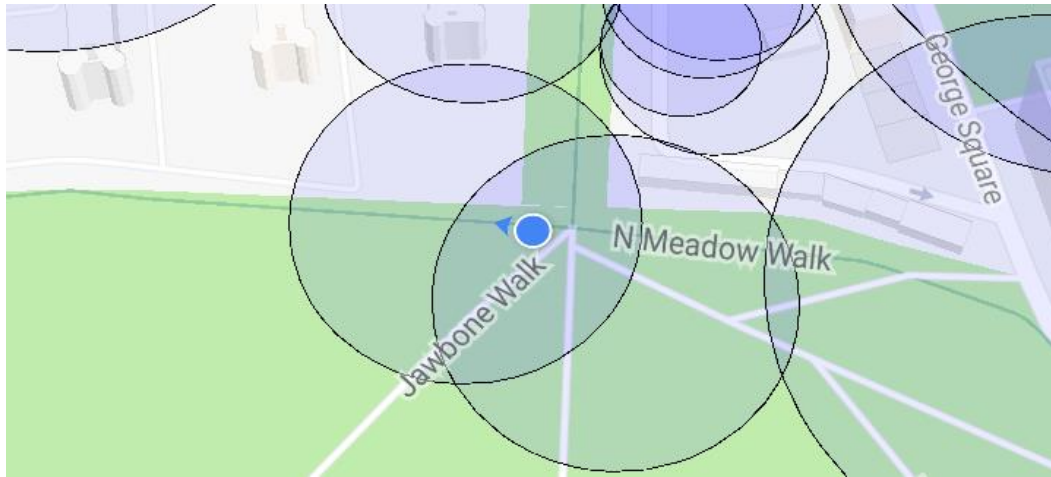


Figure 26 - *The Impossible Inaudible Soundwalk map: boyracer/kangaroo sound composition*

All in all, the soundscape compositions of the *Impossible Inaudible Soundwalk*, were created to offer a novel walking and listening tool; one that explores new ways of designing and experimenting with the city. We trialled, tested and played with sound so as to conceptualize our experiences of the city on the basis of its ambience (Thibaud, 2015);⁹² and it is here that the notion of ambience helps us shift focus from physical to affective space. Ultimately, participants in the soundwalk workshop were not involved in the design of space, but rather installed an ambience. As Thibaud remarks, we are currently witnessing what he calls a “setting of ambience” in urban spaces, through the development of conditioned environments such as shopping malls, the privatization of gated communities and “heritagization” of historic town centres.⁹³ In each of those cases, architecture and urban planning strategies are called to create an ambience and to channel sensations, through a top-down approach that favours the idea of a panoramic city. In our situation though, we used sonic design as a tool for the sensory production of an urban ambience; taking into consideration issues of a social, aesthetic, urban, ecological and political nature, through a bottom-up participatory approach.

⁹² Thibaud’s (2015) notion of ambience has a long history in French research and one of its major origins lies in the field of architecture, as well as in the tradition of the Situationist thought, particularly that of Guy Debord. It is closely involved in the built and material dimension of inhabited spaces. In some ways, ambience may be considered as the basis through which affective space is configured day to day.

⁹³ A process by which sites, structures and memorabilia from spontaneous memorials are appropriated as heritage and seen as vehicles for the creation of historical authenticity – historicity. See Lowenthal 1998; Harre and Moghaddam 2006; Ekström 2012.

4.3.2 | Imaginative listening

In terms of listening to what was created to be heard, in the instance of the *Impossible Inaudible Soundwalk*, the experience for percipients was very much musico-sonical. My intention was to activate the listener and to encourage or entice them to listen more deeply and perhaps experience, see, smell, in every kind of sense more deeply.

With compositions mostly derived from the field recordings, they resonated with Gallagher's claim that "field recordings have to be enacted to be heard" (2015, p.568). In fact, mapping field recordings that are performed by listeners through their walking movements, draws from what Myers has described as a form of "theatre of sound" (2011a), characterised by a lively performativity. This private reception of the sound makes it possible to have very intimate contact with the listeners. In our workshop context, the fact that they collectively recorded, edited, and composed upon the map, was a factor that played a role in the expressions of the micro-community which emerged. Workshop participants were familiar with the sonic material and therefore shared a pre-existing interest in the material presented. Nevertheless, for me as researcher, when having the opportunity to experience the soundwalk with people who did not play roles in its making, I observed that the feeling of connection with others was still present. Instead of being on a level of shared interests though, it was based on a communal perceptual awareness.

To this point, my listening could be described as "monophonic", to use Ihde's terminology (2007, p.117). In this, I, the listener, have been for the most part the receiver of both the organised sound, and of noise. As an experiencer I had "not yet spoken, neither have I yet heard all there is to hear" (ibid). My auditory imagination was elevated via the sound transmitted through the headphones. But it also included other sensory modes of perception; the visual stimuli and the embodied, perceptual awareness of being amongst a group of people, navigating the same area, both physical and virtual; the external noises penetrating our open headphones; or even the smell of a particular area or someone's perfume as they were passing me by, and such like. Such auditory perception of sound as external reception to stimuli, and as an encompassing presence structured my experience to include both "perceptual awareness" and "imaginative awareness". The coming together of imaginative and

perceptual experience (ibid), is where listening becomes polyphonic according to Ihde (ibid):

I hear not only the voices of the World; in some sense I “hear” myself or from myself. There is in polyphony a duet of voices in the doubled modalities of perceptual and imaginative modes.

Within this context, the soundscape, both internal (organised sound) and external (participants’ noise, spatial noise), is an object of perceptual awareness and imaginative transformation. It stems from the listening that occurs within ones’ own self-presence “that accompanies the presence of the things and of others in the perceived world” (ibid, p.118). For the soundwalkers it is the diverse sonic phenomena that give shape to the experience of their communal space. Percipients are inescapably caught amidst the “noisy uncertainties of life” (Myers, 2011a, p.74), where accidental and ephemeral ambient sounds of wind, passers-by, traffic, footsteps, etc. contribute significantly to the work. Experiencers often found themselves lingering within a specific area, so that they could finish listening to the soundscape compositions; adding an emotional layer of knowledge to the experience of the place. Also, approaching an area from a different direction, leads to different parts of the story; it also enables the listeners to choose the ending they prefer. Participant 3 says: *“I guess I am still cheating; I was kind of purposefully hovering on the edge, so it could be the end”* (research interview, 22nd February 2016, Appendix A, p.284).

Another way in which the sounds brought experiencers into closer connection with the space, was by animating their spatial perception; as the sound brought objects, bodies, stories and actions into relation with one another. Seen in this way, the soundscape compositions function as an intentional sign; with the element of composing upon the map of the area, structuring the experiencers’ perception of space. Positioning them as listening subjects, it lets the sound determine their relationship with space. Individuals were also affected on an emotional level. Here, their emotions as they related to the sound, amplified their level of awareness towards others sharing the space. An example of this, is the realisation that as you are walking along the area where the soundwalk is installed, those surrounding you in

that specific place are part of the work; whether they are simultaneously experiencing the same sonically constructed hybrid space, or not.



Figure 27 - The Impossible Inaudible Soundwalk alternative map, 18/02/2016

Ultimately, the technology, along with the space, the sound and the bodies, co-structure the listening space. In many cases I noticed how people would align their movements and spatial position along with the other soundwalkers. This re-positioning and spatial aligning in order to activate or share their listening experience echoes with Coyne's (2010) remark that portable digital devices can "fine-tune" social, individual and collective structures. It was as if the sonic performativity of the soundscape compositions, by heightening percipients' sonico-spatial awareness, also transformed their own relationship to the space in such a way, so as to technologically extend their body's audile techniques. As such, our spatial embeddedness, and sonic situatedness animated a sort of "embodied positionality" (Ihde, 2007), with an awareness of each other determining our navigations through space. In this, the emphasis on proximity and a sensory experience as primary means of community creation, means that what is expressed and experienced within the space, is shared by those within the boundaries of the community, in a uniquely intimate way. At the same time, experiencers were turned into a minor spectacle. They were often operating in isolation, in silence because they were wearing headphones, they were

walking around in their own world, but also, they moved around in a group. And then there were also the passers-by, the people of the city, turning their attention to the group, causing people to question what they were seeing on an everyday basis.

From such a perspective, the auditive experience can be described as being more decentred or despatialized; with sound becoming a medium for the production of forms of centeredness, through the reconstruction of narrative and place. The suspension of time, and management of mood through sound, are also associated with social meanings attached to various forms of auditory conditions. The relational production of local, interactive and sensitive spaces forges new platforms for changing notions of sociality, by repositioning space and location and instigating new sets of behaviour, affording a new sense of social interaction. Turning viewers or listeners into active percipients, can create a system whose outcome is not only of individual listening, but also of collective and distributed agency. In the words of LaBelle, “[i]n doing so, the work produces an uncertain, vague, and procedural sociality, where the system at work invites a move toward mingling with the crowd yet with no prescribed result: audience becomes activator, activator becomes participant, participant becomes the art, replacing the individual input with collective inertia” (LaBelle, 2006, p.260).

4.4 | Playful noises

It can be said that it is unclear what noise denotes: “[it] is too vague; simultaneously obvious and evasive” (Thompson, 2017). Just as any sound, noise too can be interpreted in wildly different ways; where for example a sound might be heard and perceived as a noise in one culture or context (such as the noisiness of hen-partying women);⁹⁴ and in another scenario noise is manipulated to become the material for a musical composition (in practices such as *musique concrète*); or noise can operate as signal (such as bell-ringing to provide acoustic communication for everyday life activities).⁹⁵ What in fact constitutes noise, can vary considerably. While it is

⁹⁴ See Thompson (2016) on the various intersections of noise and femininity explaining how noisiness has been associated with “bad” femininity in Eurocentric cultures).

⁹⁵ See Corbin's (1998) exploration of the soundscape of nineteenth-century France villages and the use of bells as their symbols.

bestowed with many negative connotations - understood as extraneous, unwanted, unpleasant, disruptive or meaningless sound (Thompson, 2016) - noise in-and-of-itself is not necessarily negative in the soundwalk context.

According to Truax's communicative approach, noises function as "sound signals" (Truax, 1984) communicating one's membership, presence and participation within their social group, giving the local acoustic community important contextual information. Yet, Truax writes about communities that are negatively defined by sound, as occurs when a community is heavily impacted by noise: "[i]n fact, noise is the chief enemy of the acoustic community" (ibid p.58). However, my experience of the intrusive noise in all the stages of the *Impossible Inaudible Soundwalk*, points to an understanding of noise as constitutive of the acoustic community. Hence, departing from Truax's 'sonico-positive' definition of the acoustic community my aim is to question this approach by arguing that playful noises act as "acoustic cues and signals [which] constantly keep the community in touch with what is going on from day to day within it" (ibid).

In proposing a perception of noise as affective force that exists outside its interpretations (Thompson, 2012), we can adopt an approach to noise that affords an awareness for listeners and mediates their spatial positioning. In the particular context of the soundwalk, noise's diverse manifestations (sonic or otherwise) serve to intimately connect percipients with the space they traverse. The instances of outside noise penetrating the sonically immersive experience through the open headphones, are examples of intrusive noise. But in our case, the intrusiveness does not imply unwantedness; noise is part of the sonic composition, blurring inside and outside space, creating an augmented aurality experience. Indeed, in the context of soundwalks happening in public urban spaces, this intrusion juxtaposed against the 'privacy' of the listening experience itself, can animate a tension between private and public which I contend contributes to a playful mode of collaborative creativity.

4.4.1 | Noise

Douglas Kahn's *Noise Water Meat* (1999), a foundational read for any sound studies scholar, explores the separation of sound and noise, from a historical perspective in a section about "resident noises" (p. 79). Kahn argues (p.81), that with the

establishment of a continuity between sound and noise by Louigi Russolo (1913), noise was recognized as inherent and inseparable from sound; embedded in musical materiality. Kahn (1999, p.81) emphasizes that Russolo's "noise presented timbre as a resident noise that invoked the world without incorporating it" (p.81). To emphasize this 'noise turn' of the interwar period, Kahn (p.82) quotes Henry Cowell's article *The Joys of Noise* for his suggestion to begin thinking of noises that are at once so pervasive yet entirely despised. Cowell proposes that those individuals practicing music should think of noise in terms of being cultured (as with food) and repressed (as with sex). He says,

since the "disease" of noise permeates all music, the only hopeful course is to consider that this noise-germ, like the bacteria of cheese, is a good microbe, which may provide previously hidden delights to the listener, instead of producing musical oblivion. ... Although existing in all music, the noise-element has been to music as sex to humanity, essential to its existence, but impolite to mention, something cloaked by ignorance and silence. Hence the use of noise in music has been largely unconscious and undiscussed (Cowell, 1929, quoted in Kahn, 1999, p.82).

R. Murray Schafer describes noise as "any undesired sound signal" (1969, p.17) whereas according to the law, noise is defined as "any unwanted sound" (Neuhaus, 1974). In the context of communication, where a message consists of signals being transmitted, noise is any sound or interference that impairs the accurate transmission and reception of the message (Schafer, 1977, p.4). This type of definition that views noise as something we don't necessarily like to hear, falls in line with many who follow acoustic ecology's understanding of the term. In a New York Times article with the noisy title *Bang, BOOoom, ThumP, EEEK, tinkle*, Max Neuhaus (1974) questions the concept of noise pollution, amidst the ethico-aesthetic ecologically inculcated notions of clean and pure high-fi soundscapes of the 1970s. There, Neuhaus makes the point that the idea that noise in general is harmful is propagandistic and has misled the public, and that our response to sound is subjective, therefore and no sound can be intrinsically bad: "How we hear... depends a great deal on how we have been conditioned to hear it" (ibid).

With recent scholarship focusing on an understanding of noise as productive and transformative, someone like Marie Thompson (2017a) for example, in her ethico-affective approach to noise, argues that noise plays a crucial role in auditory and

material culture.⁹⁶ There is no music, no mediation, no sound without noise, therefore “there is much more to noise than unwanted sound” (p.3). Here, as has been discussed in the previous sections, noise’s qualitative variability seems to manifest in its capacity to be loud and faint, audible and inaudible, perceptible and imperceptible. Again, Thompson highlights the potential for noises to have positive benefits; aspiring to move beyond acoustic ecology’s “aesthetic moralism,” (as represented in this case by the “unwantedness” and “badness” of noise), so as to allow for a broader range of noise’s manifestations.

Thus, Thompson contends that a subject-oriented definition of noise as a negative judgement of sound, which is defined by the listener as unwanted, undesirable, bad, unpleasant, threatening, etc. is too vague and restrictive; limiting noise to its obviously audible manifestations. At the same time, she asserts that an object-oriented definition of noise as a type of sound constituted by particular sonic attributes, is too narrow. Instead, she argues for an ethico-affective approach that will decentre the listening subject. This runs contrary to the sonic anthropocentrism of subject-oriented definition and the phenomenological accounts of noise. However, it does not result in an evasion of traditionally human questions concerning the ethical, the political and the cultural. Rather, it enables the development of connections between noise’s audible manifestations and its imperceptible manifestations, which affect non-human bodies and relations.

Seen in this way, Schaferian aesthetic moralism that associates noise with sonic and social taboo, can be construed as silencing other possibilities and potentialities of auditory experience. The intrusive sonic effect/affect of noise (intruding into/mingling with what is being heard beyond the headphones) touches the soundwalk experiencer in a direct physical way. And it has the power to capture their attention, whether they want it to or not. When viewed from this perspective, the collective experience of the soundwalk as presented above, adopts this affective approach to noise. In decentring the listening subject, I attempted to draw together sound’s social, informational and artistic manifestations that together enable the

⁹⁶ Thompson draws from Spinozist philosophy of affect and Serres’s cybernetic figure of the parasite to move beyond “aesthetic moralism,” represented in this case by the “unwantedness” and “badness” of noise so as to allow for a broader range of noise’s manifestations.

emergence of a collaborative creativity. In the soundwalk environment, the spontaneity of the intruder noise results in a momentary disruption to the soundscape compositions heard through the headphones; and yet, its 'intrusive' affect does not disrupt the immersive element of the activity itself – an element upon which the experience arguably relies.

Instead, these moments of noisy disruption seemed to afford a creative approach to the role of experiencer. I noticed how people would re-orient their bodies in different ways, either individually, exploring their access to different sounds, or in a collective sense, moving toward the direction of others. The entire experience was imbued with a collaborative creativity that generated a direct interactivity between listeners. Indeed, within the soundwalk itself, I was able to witness instances of playfulness emerging in those occurrences of collaborative creativity. Thus, in the next section I will expand on the notion of play as it relates to the experience of noise within the soundwalk space.

4.4.2 | Play

While noise has not been directly associated with what we understand as a playful activity, yet sound plays a crucial role in our expressions of playfulness. And so is noise, intertwined within our playful communications with others. There is a whole field of contributions from different scientific fields that examine the associations between play, sociality, and the individual, in diverse contexts (Fink, 1968; Caillois, 2001; Proyer, 2013). The concept of play is then discussed here as a tool to understand the role of noise in the experience of the soundwalk and how it informed and enabled community bonds among percipients. In Gadamer's discussion of the relation between art and play, the underlying motif is that aesthetic consciousness is far from self-contained but is rather drawn into the play of something much larger than what is evident to subjective consciousness (Davey, 2016). Indeed, I had the opportunity to observe how emerging instances of playfulness played an important role in encountering the affective power of noise in a performative context.

Roger Caillois (2001) in his book entitled *Man Play and Games*, describes "agon" as one of the four characteristics of play. There are games of *vertigo* (rushing about, spinning, jumping), *mimicry* (dressing up, avatars), *chance* (rolling dice, taking risks),

and *agon* (battles, fights), and of course any game may have these in combination. Agon is “a question of rivalry which hinges on a single quality (speed, endurance, strength, memory, skill, ingenuity, etc.), exercised, within defined limits and without outside assistance, in such a way that the winner appears to be better than the loser in a certain category of exploits” (p.14). Focusing specifically on how (outside) noise could in fact elicit a form of “agon” in a playful soundwalk context where the soundscape compositions heard inside the headphones are antagonizing the outside noise, while uncovering its potential for community formation.

Locative media as hybrid spaces are inherently playful; but the ‘boundaries’ have to be somewhat discernible in order to turn the use of this locative platform into a playful activity, through which meaning is given to places and social proximity (Souza e Silva, 2009, pp.58–59). The presence of locative sound media, i.e. tracking geo-location of each user and the headphones, affected the participants’ relationship to space and embodied interaction within the space, but it also produced a sense of playfulness. As hybrid spaces, locative media gives user-participants a double experience of place and space, and a double consciousness of their bodies moving in two realms at once; alongside other people experiencing the same thing. The instances of outside noise penetrating the listening experience within the soundwalk, interacts with the locative sound media and results in a double experience and a playful positioning towards other people within the space. I would thus argue, that the potential for playfulness of noise and sound, could contribute greatly to a holistic framework for understanding the social impact of sound in space.

In the case of soundwalks, spatial environments influence physical experience and encourage or discourage varieties of social interaction; thus, allowing a more dynamic understanding of the environment and a more active role within it. The participants in soundwalks are understood as percipients that engage actively in the process of creation and experience of the artwork. In this, mobile devices offer new possibilities for sound artists to actively involve their audiences; allowing them to explore new modes of sonic interaction and become active creators of shared soundscapes, as they develop and express the acoustic identity of their communities. Soundwalks that deal with the urban environment as a musical interface, conjure city spaces in terms of sound and music. The city is explored in terms of spatialisation, temporalisation and

embodiment; it acts as a space of interactive potential, which facilitates the notion of mobility as musical interaction between people that create music by walking through it (Gaye et al., 2003).

The stimulation of play can thus act as a method of achieving engagement and exploration among participants (Edmonds, 2007); with various art projects that turn the city into a playground, being inspired and informed by urban location-based and hybrid reality mobile games (Souza & Hjorth, 2009). Again, the city is somehow performed; and this imaginary playful layer makes it an unexpected playful experience (ibid; Sutko & de Souza e Silva, 2011). In this, it provides the means for people to interact with their physical and social surroundings in novel ways; potentially enabling a community's collective memory and allowing ordinary citizens to embed social knowledge in the new wireless landscape of the city. As such, the familiar space of the city can be transformed into a new and unexpected environment, where collaborative activities afford playful interactions among participants.

Within such a context, it can be argued that Douglas Kahn's historical approach - referenced earlier and outlining the separation of sound and noise - may apply; thus, demonstrating the importance of paying attention to noise as potential 'playmaker'. In certain instances, the presence of noise has the ability to procure a sense of playfulness for those producing the noise or in close proximity to it, and as a result builds a relational dynamic into the experience itself. And it is a quality that I would argue is one of the necessary precursors to any kind of community, large or small, forming. At times, the communal attention it grabs amidst what for many on a soundwalk is a highly personal experience, flings those sharing the external 'jolt' into a common, yet individualistically perceived unexpected domain, where anything can happen. And it is in this kernel of potential where the opportunity for surprising play in noise resides. This it can be argued, is why audible public passing of gas still elicits a sense of mirth in those who hear it, while the scent does not. Here, the interaction between that listened to through headphones and what is actually heard when external sound intrudes, deems examination.

The interchangeable acoustic state between sound and noise produces a state of double experience. It appeared to provoke a playfulness that positioned percipients

in a playful co-presence with others, whether these others were members of the group, passers-by, mobile audio devices, internal or external soundscapes. As researcher, this allows me to draw connections between the spatial positioning and embodiment relations produced by the presence and playful engagement with noise. I argue that this playful quality to noise can invoke a sense of sociality among perceiving bodies; an acoustic community where noise is not an enemy. During the soundwalk there were multiple instances for example, where the outside noise seemed to burst through the headphones out of the blue and uninvited. And yet, this resident noise managed to playfully invoke the world without interrupting the sonic experience of people walking within a compositional circle.

The agonistic interplay between the pre-recorded continuity of the soundscape compositions and the blasts of outside noise penetrating the headphones, conjured a diversity of feelings, such as intimacy, fellowship, exasperation, and eagerness. This resulted to a double experience of the hybrid space created during the soundwalk performance: that of the individual sonic journey within the auditory bubble of the organized sound, conjoined with the group membership, a micro-community that got together to test and explore the sonic boundaries of space. Indeed, these moments of external noise interrupting their otherwise sonically immersive experience, were in fact vigorous as they instructed percipients to adopt a playful re-positioning, in relation to the acoustic environment and to their interactions with the space and the other members of the group. Hence noisy intrusions, in tandem with noise compositions afforded a fleeting sense of intimacy that brought all experiencers in a state of playful double experience. Overall, the response to those playful noises proved to encourage both collaboration and creativity.

4.5 | Creative bodies in sound

For the past two decades, *collaboration* has emerged as a keyword and an important methodological and ethical concern in various scientific disciplines, with interdisciplinary approaches that often encompass both the 'soft' and 'hard' sciences, growing globally. In tandem, recently the contemporary art world has seen a resurgence of socially engaged art. Work that takes itself out of the institutions (sometimes physically other times symbolically) to engage directly with the social

realm, through participation and collaboration; blurring the lines between art, performance and our lived social, political, economic, and environmental realities. Today, artists around the world are taking their engagement with art beyond the institutional space of the University lab, or classic studio and gallery settings, into the social world, towards a socially engaged art practice. For Akoo-o, it is important to bring forward the collaborative aspect, or to do things in collaboration with the local people. Akoo-o member, Nikos, insists on the importance that dialogue and conflict have in their practice: *“We discuss intensively, or less intensively, with agreements and disagreements on how the final result might be”* (research interview, 2nd January 2017, Appendix A, p.284). Sofia expresses similar views: *“The essential practice is that we discuss a lot about it; and we try various things and then re-try”* (research interview, 30th November 2015, Appendix A, p.284).



Figure 28 - The Impossible Inaudible Soundwalk: DIWO composition on the map, 18/02/2016

Through this collaborative creativity, an immediate sensation of a shared reality, a shared “lifeworld” is conjured; one that is co-created by a group of people in the same space, through a playful sense of co-presence and a collective feeling of togetherness. The soundwalk space as has been analysed in this chapter draws on George Marcus’

concept of para-ethnography (Holmes & Marcus, 2008; Marcus, 2010; 2012; 2013) which was developed to capture the reflexive and intellectual practices in contemporary fieldwork contexts. Marcus argues about “the appeal of alternative forms of articulating thinking, ideas, and concepts inside or alongside the challenge of situating and managing the fieldwork process— in “third spaces,” archives, studios, labs, “para-sites” and the like” (2012, p.430). For Nikos from Akoo-o, who understands workshops as spaces where they can engage in collaborative field recording and sound editing practices, they are also opportunities to exchange knowledge and ideas. Indeed, one of the participants of the *Impossible Inaudible Soundwalk* has collaborated with Akoo-o in other projects as well since then.

workshops are very important ... they are an opportunity to re-vitalize and energize from others. The people that participate are collaborators. There isn't this power relationship between the teacher and the student, you understand them as collaborators Workshops are a learning experience for us too, as a collaborative practice with others who might become our collaborators in the future; and also, as a material or techniques that they can use in the future, as technology or technique. So, in a sense, the workshop is a work ... it is collaborative, it has some performative elements (research interview, 2nd January 2017, Appendix A, p.284).

In the case of the 3-day ILW workshop, every phase was preceded by lengthy discussions between participants. The creative and collaborative endeavour of collective listening and processing of audio material, thus became a knowledge-making process, imbued with and highlighting a variability of meanings. We were literally involved in processes of creating, or designing, a new concept of creative collaboration, which included artists, researchers, students and participants. In this, the creative engagement with sound, and the combination and innovation with technology, was the basis for constructing a relationship with each other. One may note that the concepts of collaboration and creativity have oft been used to describe the shape of my experience with sound, in my exploration on the role that sound and walking play in creating acoustic communities. And indeed, creative and collaborative endeavour were very much at the core of the creative practices that took place in February 2016, wherein my collaborators showed interest in the potential of sharing their experiences and creating new knowledge through sound. In many ways thus, this particular acoustic micro-community was developed through creative and

collaborative processes of soundscape composition and vernacular mapping; while the process itself, was an example of a creative collaboration in a third space.

These processes, as have been described in the preceding sections, enable particular relations - including those to sound and place - to be founded upon personal life experience, kinship and emotional knowledge, where collaborative creativity enacts an essential part. These relations are also generative in the sense that they have the capacity to reconstitute persons relative to their context and others within in. I observed that after the initial confusion and annoyance, a perhaps surprising effect of the intrusive sound was its unifying impact, as it gave way to connect and communicate with fellow community members. And it can be contended that it is out of this double experience that the soundwalk as a whole is experienced more interactional, and how meaning is constituted. Unlike the original soundtrack wherein noise has been intentionally integrated into the soundwalk - with and duration and pitch particularly manipulated so as to intrude upon the bodily sphere - the presence of noise in the soundwalk experience was much more spontaneous in nature.

The soundwalk and soundmap that resulted from creative agency as creative invention, thus epitomize and mediate social relations among the acoustic community members, as well as the space they created and inhabited by engaging in the process of creative collaborations (Born, 2010, p.13). Stoetzler and Yuval-Davis (2002), reading Haraway and Guattari, argue that the relation between imaginaries and knowledges that are based on performativity and imagination, must always be situated so as to mobilize creativity in practices, while at the same time remaining distinct from actualized imaginaries. Rationality and imagination are “not separate faculties but dialogical moments in a multidimensional mental process” (Stoetzler & Yuval-Davis, 2002, p.324). Then, creativity becomes an imaginative process, producing new modes of experience that can co-create the present and imagine the future by transforming knowledge and imagination, and epistemology and aesthetics, into a process of co-invention (Hughes & Lury, 2013, p.797). Such creativity of imagination, according to Timeto (2015), “has nothing to do with fantasy but much to do with facticity, re-situates knowledge inside an ecological network of practices, which include places, relations, affects, bodies” (p.153), and also sounds.

4.5.1 | Double consciousness

The notion of presence as it is experienced within the soundwalk space, necessitates further discussion because it connects one's experience of spatiality, interactivity and creativity; here showing how shared embodied experiences relate to embodiment and forming of community. In the case of the *Impossible Inaudible Soundwalk*, the use of headphones to transmit a hybrid space of augmented aurality directly into the ears, takes a common and often unnoticed companion of our daily activities, to provide a sonically unusual content. Headphones are thus recontextualized to become a performative element that is key to the experience of sound art in public space. More importantly headphones give new perspective to what we are experiencing, and how we are perceiving the sounds, the space, and each other. This familiarity of the headphones as a ubiquitous listening-sound object, and the importance of how they perform in our everyday lives, truly translates into something concrete when they are incorporated into soundwalk experiences. Indeed, today headphones are integrated into our everyday commutes (whether we are walking, cycling, or using public transportation) and daily routines along with the proliferation of smartphones and personal audio devices.

When mundane technologies, such as headphones or ear pods, are taken out of their familiar context and placed in the realm of the sound(ing) art experience however, an interesting dichotomy occurs. On the one hand, soundwalkers are brought into a familiar state of communal listening that renders the soundscape a shared space, while at the same time the performative aspect alienates the use of this same technology. Soundwalkers, to put it another way, seemed to experience a loss of complete control over their experience of the auditory space, while they were engaging in the otherwise familiar practice, that is listening through the headphones. The audio content thus becomes less of an accompanying supplement to other (mobile) activities and transforms into the activity itself. As such, the act of listening itself is also transformed in the performative context of the soundwalk. The listener must engage in a performative act of agential listening that while it is subjective, it is not necessarily individual. A polyphonic type of listening then emerged within the context of our group's experience, that was the product of two technological elements

(headphones, and the mobile app) creating a sort of tension between intimacy and distance.

First, the presence of headphones shaped the experience of connection and co-presence with others, since everyone was wearing them, distinctly defining the visual boundaries of the acoustic micro-community: anyone not wearing headphones was not a member of the group. Beyond the physical and the visual homogeneity afforded by the presence of headphones, a collective feeling of intimacy and connection was fostered by means of sonic consonance. The fact that everyone could hear the same audio content created a kind of sonic kinship based on the assumption that everyone within close proximity to you could hear the same thing. At the same time though, the use of headphones can also have the opposite effect, actively encouraging a more isolated individual experience. The headphones created a feeling of distance from others; being immersed in your individual sonic cocoon restricts the opportunities for communal engagement. However, in walking with others and experiencing the *Impossible Inaudible Soundwalk*, I witnessed the inevitable presence of interpersonal communication, in recognition of experiencing a similar difficulty: the moments of outside noise penetrating the headphones, or the failure of the GPS signal, or a blocked route. For Coyne (2015), this is a classic example of a spatial transition taking place that can also be described as an “aha moment,” if it involves “some struggle, even frustration, and leading to the achievement of a goal, or perhaps a reward,” which in this case it is the feeling of clarity, which I interpret in this context as engagement or immersion. The expectation, anticipation, and excitement that Coyne debates are the entanglement of sound, space, and technology, in the soundwalk experience.

The second (technological) element shaping the double experience, of intimacy and distance, was the mobile app. As part of the whole system, it enabled each percipient to freely move around the space and listen to the audio corresponding to whatever compositional and spatial circle they decided to traverse. For many this creates the feeling of a very intimate and personal tour, where they can choose the order of event. They feel as if they are directing the experience for themselves, while at the same time being always aware that something or someone was tracking the movements. In this way, the app itself encapsulates the entangled and interdependent relationship between body, sound, and space. The design required a careful compositional strategy

upon the map of the area of the soundwalk, while this deliberation of the space was intertwined with reflecting on which sounds would be played when. Another distancing effect came from the realization that the design of the soundmap allowed for an individualized experience, whereby one individual could wander outside the soundwalk space and thereby may not have heard the entire performance. One was free not to stay in one place long enough to finish listening to the audio clip. This fact created the idea or awareness of distance; that each participant's experience was slightly different; and that individuals navigated through the space choosing their own path.

The awareness of the sonic dissonance between experiencers who visibly would choose to break away from the group in their quest for an autonomous sound journey, and of the intimacy of sonic kinship simultaneously created by their shared membership to this acoustic micro-community, can be understood here as a specific form of "double consciousness" (Du Bois, 2006).⁹⁷ By using Du Bois's concept of double consciousness I intend to suggest that taking on either, or both of these unfinished identities, does not necessarily exhaust the subjective resources of any particular individual. In the words of Percipient 7, the double value of tension between fulfilment and transfiguration follows from being both inside and outside: "*on the one hand connected to the others*" participating in the same experience of group membership, while feeling to some extent "*separated from others*", a feeling of immersion in "*an independent sound journey*" (group conversation, 29th September 2017). Indeed, the double consciousness afforded by mobile audio technology, is the awareness that we are crossing barriers, however blurred they may have become according to Hans-Georg Gadamer (1986). This means that the percipients are aware of both states of being: both distanced from others — on an individual journey; and simultaneously having feelings of intimacy with others in the space — a collective journey where there is reliance on others for the experience to exist in the first place.

⁹⁷ W.E.B. Du Bois uses the term double consciousness to describe the internal conflict that is the result of the challenge of reconciling his African heritage with his upbringing in a European-dominated and relatively tolerant community.

4.5.2 | Distributed agency

These surprising, unexpected moments of the breaking or doubleness of experience injected the soundwalk with a playfulness and renewed sense of agency and collective engagement with the space and each other. Here, the question of agency as distributed, is understood in the sense that the action is subjective but not necessarily individual. According to Coyne (2009), today, the potential of collective agency is found in the grassroots development of digital communications technologies and the ability of portable digital devices to “fine-tune” social, individual and collective structures. By introducing the idea of “distributed agency,” Coyne adopts the proposal that “human environments already include structures that enhance specific results” (p.129), arguing that “out there” is at the same time the source and the means for agency. In the case of projects that call for aesthetic integration by the user/listener, the concept of agency is strengthened as a shared product of social processes taking place “out there” in the public space.

From what has already been discussed, it is clear that at a time of digital mobility, we can also use the devices that facilitate this to augment public engagement in spatial practices, in collaborative decision-making and to explore new ways of interaction in spaces. These media bring sociability and agency to light in new ways, thereby noting the potency of mobile devices to fine-tune human interactions. Ubiquitous digital technologies and their networks are thus among those dynamic sub-architectures that make up the environment (Coyne, 2010). For Coyne, devices have the capacity “to create and extend otherness, to detune relationships and expose disparity and detachment, provoking a sense of estrangement, a “heteroglot opinion” and a “dislocated action”” (2009, p.130). Not only does the device’s presence and performativity during a soundwalk shape the experiencers’ perception of listening, but it also shapes their perception of each other through the embodied interaction with sound. Overall, an apparent double consciousness was fostered by the sharing of the mobile sound devices (i.e. headphones and mobile device with the app), and of ones’ own reliance on these devices to navigate and experience the space. Firstly, of one’s movement being controlled by the performativity of the sound device, and then that *you* as the listener controlled your own movements within the overall space.



Figure 29 - The Impossible Inaudible Soundwalk experience, 19/02/2016

There is also a certain degree of intimacy implied in this particular mode of listening, which is mediated through the technologies and techniques that these devices employ. Proposing a joining of history, phenomenology of interiority, and phenomenology of listening, Roland Barthes suggests a new mode of aural attention; emanating from the shift to private listening that is active, dialogical, and intersubjective. This mode of listening suggests a return to the tactility or embodiment of hearing, which is activated by a kind of touch between the listening subjects; he says: “‘listen to me’ means *touch me, know that I exist*” (Barthes, 1991, p.251; italics in original). The headphones and personal stereos commonly used in soundwalks, thus can create an additional space of intersubjective listening, which not only extends or transfers this ‘touch’ between the listening subjects within an interior bodily space, but also externally, within a specific landscape with its spectrum of ambient sound. The soundwalk in this sense performs as an “embodied act of landscaping” (Lorimer, 2005, p.85).

4.6 | Rethinking the auditory bubble

Mobile audio devices provide us with our own privatized auditory bubble of sonic departure allowing us to achieve a level of autonomy over time and place (Bull, 2005b, p.344). Mobile listening, as has been discussed in Michael Bull’s book on the use of

iPod in practices of everyday movement through the city, facilitates a soundtrack to one's own inner thoughts and memories (Bull, 2007). In this relationship with mobile audio content listeners construct meaningful and pleasurable narratives of their spatial experiences. As a performative act in the soundwalk context, this immersive experience displayed both visually and sonically, provides a mode for experiencing ones' physical movement through public and private space, while also establishing the confines of personal space. Through the use of mobile sound technologies, listeners "attempt to 'inhabit' the spaces within which they move" (Bull, 2005b, p.344) by entering into the auditory imagination. By bringing urban movement and listening together in the hybrid experience of the soundwalk, spaces are thus occupied.

As we already know, a double experience manifests within the immersive soundscape, which is coupled with the subject's embodied interaction with the sonic elements of soundwalk and the physical presence in the space. With all this co-production of the experience, the percipient's position is also granted relative independence; an escape from the traditional conventions that govern spatial behaviours in everyday life. Soundwalking as a performative act is therefore a liberating experience, in that the content occurs inside, independent from the external world. At the same time, the disjunction between the movement of listeners who walk to their own soundtrack and the movement of others and the environment (built and natural) passed through, cannot be underestimated as it is a key component of this hybrid space. Within such a framework, space is created by an increased level of imagination, by playfulness and by reflecting upon one's own experience. However, this does not mean that this kind of experience is disconnected from the lifeworld. In many ways, participation in soundwalks creates the possibility of perceiving and experiencing oneself both within the soundwalk's aesthetic framework and in relation to the lifeworld. This is an experience of a shared lifeworld, in the way that Ihde (1990) understands it. His technologically informed modification of the term *lifeworld* is based on the distinguishing of two senses of perception (p.29):

What is usually taken as sensory perception (what is immediate and focused bodily in actual seeing, hearing, etc.), I shall call microp perception. But there is also what might be called a cultural, or hermeneutic, perception, which I shall call macrop perception. Both belong equally to the lifeworld.

Both these modes of perception are jointly related and interweaved: “There is no microperception (sensory-bodily) without its location within a field of macroperception and no macroperception without its microperceptual foci” (ibid). The double consciousness that was the product of the implicit body’s potential of both micro- and macro- perception, in tandem with the inherent temporality of the sound and the dependence on the moving percipients’ geo-location, in some way produced a sense of shared lifeworld. That was the immediate and grounded bodily experience of sensory perception when one encountered the different soundscape compositions as they were moving in space, and the hermeneutic or cultural associations experienced at the same time, that cannot exist separately (Ihde, 1990; Coyne, 2009).

A similar mode of thought is exercised in the discussion of how sound’s performativity arranges listening subjects in relation to space. Sound and noise create a shared hybrid space, which it is hoped enables the soundwalk to exist as the immersive, creative and playful experience that it was actually designed to be. All in all, therefore, the affordances of the soundwalking experience described above, point to a combined enablement of interesting possibilities for the development of social connections along with the aesthetic; making a significant contribution in empowering an artistic acoustic micro-community to emerge. In this, the double consciousness (of being inside-outside, individual-community, etc., as described above) that results from the experience, knowledge, and lifeworld that each percipient brings into their actual experience of the soundwalk enables the production of a hybrid space of augment aurality, collaboratively created.

Immersive performance explores appearance and environment, with place as context; but the immersion felt during the event is somewhat independent from the outside space. The experience is guided by the shared interest in the event, established outside the frame of the soundwalk space, though it flourishes fully within the actual, physical space. In this, an intersubjectively shared lifeworld is exhibited among the members of this acoustic micro-community who might have never met or interacted with each other in their everyday lives; creating a network of people who come together to shape their experience of space. Maintaining the individual experience as independent, playful and full of possibility, while at the same time positioning the subject in relation to others on a spatial and embodied level, grants

potential for the formation of community bonds. The creative collaborations that I witnessed among the acoustic micro-community members, stems from the simultaneous awareness of being 'spectators' and 'performers' in the soundwalk. Percipients are aware that without their collective creativity and performativity, the soundwalk itself would not exist.

In the cases of works of mobile sound art discussed previously in this thesis, we can see that every soundwalk somehow involves participants, requiring them to engage with their soundscape; resulting in a series of immersive experiences provoked by the presence of sound. Within this experiential context, soundwalkers enter into a reflective condition of double consciousness; they become aware of their exploratory movements through the soundwalk space, together with the fact that they both experience and perform the work. Then this is shared as situated knowledge by all percipients; it emerges from the tension between the individual exploration of space and the collective listening of the soundscape compositions, in synchronicity. Even this experience of communal listening that affords feelings of intimacy, is only transitory, in the sense that the audio technology imparts to users the opportunity to browse at their own pace, to leave a compositional circle whenever they choose, and to move through the soundwalk space in whatever order they prefer; choosing to become disoriented.



Figure 30 - The Impossible Inaudible Soundwalk experience, 19/02/2016

In this way, the double consciousness inherent to the soundwalk situation as it affects one's perceptual experience, brings embodiment into the discussion; making it an important element in the engagement with sonic performativity. Ihde (2009) understands embodiment as an unsettled process: the individuals move through an alternate network of embodied conditions of presence and of perception. As such, the effect within the soundwalk performance, is that the embodied self is extended and hybridized through technology. In our work, this framing of embodiment provided us with a more synchronous and co-creative relationship with the technology we used (headphones, device, app). This sonic-social-technological assemblage enabled this relationship to be perceived through the auditory realm, as it is only through the perception of sound triggered by bodily movement, through which embodied states of presence can be felt.

In fact, in the case of works of walking sound art, the actors have evolved and transformed to include non-human others. As such, the combination of sound and technology, substitutes for the role of a human facilitator (animateur); guiding the spectator, turned actor, through the space in increasingly engaging, immersive and interactive ways. In this, the human body, with its varied perceptual modes of understanding and sensing the world and others within it, becomes increasingly mobile, perceptually active. More and more the body actually guides the performative experience, and sometimes even the direction of the event itself. Therefore, by the processes of embodiment, the actors (both human and non-human) orient their lived body in particular ways; sometimes experienced as being present, while simultaneously undertaking a chosen or accidental identity, social role, or actor in relation to others and to context. The sound in the soundwalk is able to negotiate the near and the far of the experience, and in presenting both (near and far) as constructs, enables the embodied understanding of active perception in participants (Nicklin, 2017). The auditory experience within the soundwalk space illustrates this relational quality of embodiment; where the physical body is called into a state of attention, as the experiencer is forced to encounter the immediate emotional, embodied state of the other. I posit that such interactions, are affective moments of connection between bodies.

Ultimately, there is constant tension and release in all of this: intimate connections with those in your immediate locale, and elements of distance experienced at the same time. The immersive sonic space of the soundwalk thus establishes a unique way of moving through space, potentially in both dissonant and harmonious ways with fellow members of this artistic acoustic micro-community. And it would appear that it is through this doubling of creativity and collaboration that in fact a community can be formed. It is arguably this doubleness that leads to a playful state of negotiating the rules of engagement within this acoustic community – co-creating in constant individual flux, which allows for the unexpected, strange and transformative to emerge. The impact of sound in this kind of cross modal perception, inherently involves the interactions between two or more different sensory modalities and therefore enables an emerging sense of togetherness, co-presence and formation of community ties. And if one follows this vein of thought then, every experience of sonic immersion in public space should be considered in all its (sensorial) complexity and multi-media relationships, as holding such potential for going beyond digital connectivity, to tangible, albeit at times fleeting, connection. Ultimately, the embodied interaction, between non-human and human actors and spectators, produced a bodily positioning of oneself in relation to others within the space, at the interaction of the sonic (actor) and mobile, embodied subject-listener (spectator).



Within such a context, the use of a post-phenomenological perspective enables us to explore how our experience with technology modifies what and how we experience the world and each other. Seen in this light, the case of creating and experiencing the *Impossible Inaudible Soundwalk* (Figure 31) provides an ideal space for exploring such encounters; reinforcing the link between co-creativity and community formation, as it invites us to engage playfully with how we perform our social and embodied relations. In this way, the soundwalk provides a post-phenomenological approach, in that it provides a reflective space for exploring the relationship between the human body and technology. Stern summarizes this impact arguing that:

[s]ocial anatomy couples embodiment with the emergence of a kind of actively produced and differentiating community, and community with the emergence of the body, in a way that amplifies each as not only relational, but a moving, sensible concept that we experience and practice, as it is formed (2013, p.164).

Here, the role of the emotional body and its relation to place-making needs to be considered. The influence of sound in the making of place is central, both in the ways in which sound impacts on the representation of space, and in how we relate our bodies to the soundscape. The “ensounded body” enables a “sensuous awakening” (Berrens, 2015; 2016) which enables a more profound approach to our environment, using our minds and bodies to gather information and to make meaning. This “sensuous awakening” demands a return to our senses, so as to inform our making of meaning, and foster a reconnection with our sensory body. According to Ahmed, through this awakening, perception and emotion will enable an embodied understanding of our surroundings (2006). Ahmed, in discussing dis/orientation in her book entitled *Queer Phenomenology*, argues that moments of disorientation can impact on the orientation of bodies and spaces, and proposes re-connecting with our sensuousness in order to gain a richer understanding of our everyday life:

The point is what we do with such moments of disorientation, as well as what such moments can do – whether they can offer us the hope of new directions, and whether new directions are reason enough for hope (Ahmed, 2006, p.158).

Meaningful place-making is achieved through listening to the voices of space i.e. the mechanical and architectural aspects of sound (Blessner & Salter, 2007), as well as its

physical impact on our body (Drever, 2009; 2011). In addition, if we understand the percipient engaged in this active role of listening as 'a locus of place and knowledge production, who alters and determines a process and its outcomes through their skilful, embodied and sensorial engagement' (Myers, 2011, p.71), then the locus of meaning in the soundwalk is shifted to the listener, listening with her whole body. As Ihde (2007, p.45) describes:

Sound permeates and penetrates my bodily being. It is implicated from the highest reaches of my intelligence that embodies itself in language to the more primitive needs of standing upright through the sense of balance that I indirectly know lies in the inner ear. Its bodily involvement comprises the range from soothing pleasure to the point of insanity in the continuum of possible sound in music and noise. Listening begins by being bodily global in its effects.

Teri Rueb (2002, quoted in Behrendt, 2012, p.288), provides a description of sound that encapsulates the inherent double experience of listening; at once intimate and all-encompassing, and at the same time invisible without edges or boundaries, remaining distant and just out of grasp:

Sound presents us with a world in which hard and fast boundaries do not exist. We cannot clearly distinguish the edges of a sound as we might with objects and physical spaces. Sound is mutable, fleeting and ephemeral. It bleeds, it leaks out, it attenuates and disappears. Sensually vibrant and immersive, sound is almost tangible, yet ultimately invisible. Yet for all its elusiveness, sound is everywhere and all encompassing. Unlike vision, which demands the proper orientation of our frontally located eyes, we hear sound with our whole bodies, not just with our ears.

In this, the whole-body listening experience can contribute greatly to investigations of how community connections form and under what circumstances. Here, by exploring how an acoustic community is formed within the soundwalk space, we can draw significant conclusions on the acoustic experience in our everyday spaces and urban environment. Indeed, I believe that it is possible to create spaces along our everyday habits, practices and journeys, which activate our imaginations, engage our senses, and position our bodies and minds outwards towards others. The effects of such an integration could be substantial for how we engage with each other socially in public; creating an enhanced awareness of how important our environment is on physical and mental health, safety, and social wellbeing, while instilling moments of spontaneity, joy, grief, human connection, empathy, aversion, laughter, disgust, and playfulness back into our social spaces.

What I aimed to demonstrate by devising a framework for analysing the interconnection between the sonic and spatial experience, is the possibility of exploring and imagining the potential within our everyday spaces, in terms of both design and implementation. In this context, the soundwalk is presenting a hybrid space activated by individuals' movements and that has to be navigated as a whole, according to Nicklin "reconciles the 'far' of pervasive technology with the 'near' of lived experience" (2017, p.145). Ultimately, this (near and far) and other dualities have been explored in this chapter; and the concepts of creativity, collaboration, and phenomenology were used to describe the shape of my experience with sound. Indeed, I have used these concepts of creativity and phenomenology as tools and theoretical objects guiding my exploration of the role that sound and walking play in soundwalking experiences, as well as to what extent sound in this framework positions its listeners towards each other; describing the motives, stages and models of participation that took place during the various stages of the soundwalk.

I will further develop and elaborate this framework as I move through the next chapter, which addresses the idea of the soundmap as incorporating sonic play, performativity and interactivity; highlighting ways that these sonic affordances could be applied to our urban designs and everyday spaces. Seen in this light, soundmaps provide the possibility to map not only the individual but also the collective product of the imagination; including the invisible and the natural memory of the sound, as experienced by the world and ourselves. In taking these ideas further, the next chapter now examines the concept of the soundmap. To do so, it deploys a critical approach in investigating how far we can push the boundaries of the typical cartography of a soundmap, so as to produce diverse discourses in the fields of sonic and spatial practices, auditory culture and performativity, experimental cartography and sound art.

Chapter 5 | The Sounds of...: Mapping space in sound

5.1. | Introduction

Mapping has become a popular and much commented-on practice in social sciences, humanities and art. In recent years, human geography has been concerned with affective, embodied spatial practice, particularly with the turn to “non-representational,” or “more-than-representational,” theory (Harrison & Anderson, 2012; Lorimer, 2005; Thrift, 2008).⁹⁸ Non-representational theory has critiqued the emphasis placed on interpretation and meaning by the social sciences (Thrift, 2008). Non-representational geography is focusing on “how life takes shape and gains expression in shared experiences, everyday routines, fleeting encounters, embodied movements, precognitive triggers, practical skills, affective intensities, enduring urges, unexceptional interactions and sensuous dispositions” (Lorimer, 2005, p.84). It shifts its attention to how life happens through practices, performances and affects, whose perpetual motion is constantly slipping out of the grasp of representation.⁹⁹ Indeed, all these themes resonate in one way or another with more experimental sensory approaches to cartography, informed by principles of non-representational geographies and affect theory, such as soundmaps.

According to the geographer John Krygier, “[o]ur sense of hearing, which has until recently been underappreciated as a means of representing data, can be used to expand the representational repertoire of cartographic design Sound, in other words, provides us with more choices for representing data and phenomena, and thus more ways in which to explore and understand the complex physical and human worlds we inhabit” (2008, online). This chapter thus is asking: how do we understand and represent our acoustic environments? How far we can push the boundaries of the typical cartography? Within such a context, I explore the soundmap, and I discuss a

⁹⁸ In non-representational theory knowledge is firmly located in matter, or in the “entanglements of matter and meaning” (Barad, 2007). It is also produced relationally, and it is not associated exclusively with rational, subjectivity, or even human property, since, according to Timeto (2015), these are all assumptions that belong to the tradition of Western Modernity.

⁹⁹ Following an increasingly popular line of thinking, from Spinoza, through Deleuze and Guattari, via Massumi, affect is defined as the capacity of bodies to affect, or be affected by, other bodies (Protevi, 2011, p.393).

variety of sound-mapping and soundscaping projects, which in deploying contemporary mobile practices of field recording, both construct and react to different spaces. Although maps are often used to provide a global, top down view of a place or a situation, I argue that mapping can become a much more complex activity; one which escapes traditional representations and is associated with creative and affective processes.

5.2. | Soundmapping methodologies

Soundmapping practices are informed by non-representational geographies, where maps and mappings are understood as emergent processes and performances. In this sense, they assume a revised understanding of space and of representation; exploring the possibility of interpreting maps in a non-representational way, according to a performative perspective. The main issues structuring this chapter, will therefore concern ways of “rethinking the map” (Kitchin & Dodge, 2007). This includes ways in which we create, experience, and share relationships with places through combinations of sound and cartography, and how we compose maps that evoke memories of events, times, and social relations.

People create their own soundscapes by engaging in deep listening practices that conceptualize these subjective experiences. Exploring the performativity of the soundmap, may thus inform the very way we tell stories about the creation of our soundscapes and of our subjective realities. In this way, soundmapping practices can affect our views on the formation of subjectivity and politics of belonging. Indeed, this approach is in line with scholarship that views maps not as static objects, but as communicative and political processes that are continually negotiated and contested. It disputes binary separations between representations and practices, as well as between the production and consumption of sound, music and space.

Using sounds to populate the virtual environment of a map can be thought of an alternative language system; and soundmaps can be explored as a vehicle of science, imagination, or metaphysics. The extent to which they are employed as mapping tools relates to an individual's intention. Like any map, soundmaps have no prescribed method of production, but, depending on the methodology and intended outcome, I

identify four basic methods of mapping sounds: visual, cartographic, compositional, and performative.

5.2.1 | Visual

This category contains visual or “silent” soundmaps without sounds. These are visual or graphic representations of soundscapes, usually focusing on places’ attributes of noise or silence. The research questions that these projects set out to answer, inquire about the attributes of environmental soundscapes that make us “tune-in” to or “tune-out” from particular sounds; they differ between those that are mapping quiet zones for acoustic pleasure, and those that find noisy urban soundscapes a more comforting prospect. An example of this category, *da_sense*, employs a “hybrid sensor network” (fixed, wireless, and participative sensing) for urban environmental data acquisition and visualization, which includes sound, temperature, brightness, and humidity. For noise measurement, it uses smartphones and their custom Android app NoiseMap, where noise measurements are uploaded by app users and accessed via an online mapping interface in non-real-time (Aumond, 2016). Likewise, *bruitparif*, initiated in 2005, is another project that focuses on noise in the region of Ile-de-France; run by a non-profit private organization with partners from both private and public domains. This project employs several mechanisms for its sensor network, including lab vehicles (essentially cars with microphones), permanent measurement stations, and handheld sonometers (Aumond, 2015). The *Quiet Walk* is an interactive mobile artwork for sonic explorations of urban space, which aims to find the “quietest place” (Altavilla & Tanaka, 2012). An interface on the mobile device directs the user to avoid noisy areas of the city, giving directions to quiet zones; and data collected by the system generates a geo-acoustic map of the city. The system is comprised of three components, a smartphone app, a web server collecting the GPS and acoustical data, and a computer displaying a visualisation of the soundmap. This creates a “silent” soundmap of the city, which changes dynamically over time, due to the daily activities in the urban space.

Lately, musicology and popular music scholarship has experimented with mapping practices too. The *Mapping Popular Music in Dublin* (MPMiD) was a research project that sought to map popular music experience in Dublin by looking at popular music

from the viewpoint of music listeners: (citizens and tourists), musicians, and music industry personnel. The project's goal was to inform cultural policy makers and industry analysts, as well as to contribute to strategies that enhance Dublin's reputation as a place for popular music experience. In this, map developers recommend the development of a music ecology strategy; with input from the music industry, civic agencies, tourism agencies and industries, media organizations, musicians and other workers in the field, as well as music networks, arts and education provision services and community groups (Mangaoang & Flynn, 2016). Similarly, researchers involved in the research project *Popular Music, Mapping and the Characterisation of Liverpool* questioned not only how the city shapes music-making practices, but also how music-making helps to produce and shape the city. The main goal was to address these questions about the relations between music and the city, particularly in terms of the production of the character of Liverpool as a "musical city." The research looked closely at three sites in Liverpool's popular music landscapes and heritage, which themselves have taken on broader symbolic meanings as being representative of entire musical genres and eras. Researchers observed that these venues are considered landmarks that have come to represent significant moments in Liverpool's musical heritage, and pull heavily upon the social and physical fabric of the city's landscape and character (Lashua et al., 2010).

5.2.2 | Cartographic

Cartographic soundmaps are the most common and broad category. Approaches here vary: from crowd-sourced research projects to authored artworks; from representing the soundscape of a particular city or area, to that of the whole world. We can also identify different popular themes, such as soundmaps that act as online archives of ethnographic field recordings, or environmental soundmaps of the world's biosphere. Their visual representation follows a traditional cartographic representation of sound environments, with hot-spot areas along the grid where audio contributions are tagged on. They encourage the emergence of specific "grammars of mapicity" (Denil, 2012) and cartographic epistemologies, and they are, in most cases, open and available online for anyone to experience and/or contribute. Most projects in this category are large-scale soundmaps, often crowd-sourced, which in the context of participatory social networks, "democratizes" cartographic practices.

Montreal Soundmap, one of the first online soundmaps, is an example of a particularly detailed single location soundmap, intended as a constantly shifting sonic time capsule of the city. Users of this map can search for sounds by location, or when they were uploaded, the season, day of the week and more, with each sound offering details as to who recorded it, how, what was going on and even what kit they used to capture the sound, as well as contribute their own sounds (Stein & Stein, 2008). Following *Montreal Soundmap*'s popularity, a series of soundmaps of different cities followed. A successful example is the *Belfast Sound Map*, an interactive, online platform, which allows users to upload field recordings and commentaries about the Belfast soundscape.¹⁰⁰ It portrays the city's unique character and identity in sound, by engaging local communities in capturing everyday sounds of the city. Developers have encouraged not only the submission of sound recordings, but also other forms of experiencing and registering sound, such as text or image. The overall design of this platform facilitated this multiplicity of approaches, while also allowed participants to create their own projects.¹⁰¹ The map serves as the stage for a series of local workshops as well, as part of knowledge outreach.¹⁰²

Another project, *Favourite Sounds*, gathers information on what people find positive about their everyday sound environment.¹⁰³ The artist behind this project, Peter Cusack, asks people what their favourite sounds are and then goes to the place they exist and records them, using high-end recording equipment. Each sound file is

¹⁰⁰ The project is led by artists and researchers from the Sonic Arts Research Centre (SARC), Queen's University Belfast.

¹⁰¹ These individual projects are presented as separate, individual layers of recordings within the map. The user/listener is also invited to explore the map in various ways, including an auto play mode which creates a sequence composed of different recordings.

¹⁰² Projects such as *Sonic Postcards* and *Sound Mapping Workshop at Place* have used the *Belfast Sound Map* platform to capture characteristic sounds of the city as a student project or to explore sound as a key part of the city's atmosphere.

¹⁰³ *Favourite Sounds* (1998-), developed by Peter Cusack, is a soundmapping site, based on Google maps, set up to explore the connections between sounds in the environment and their geography. It is one of the earliest collaborative sound mapping projects that has aimed to discover, and celebrate, what people value about the soundscapes of the cities, towns and neighbourhoods where they live and work. *Favourite Sounds* has been influential in inspiring the recent proliferation of online sound maps, establishing a framework for producing collective ideas of soundscape, and suggesting approaches to urban sound that extend beyond noise pollution.

characterized by a name, description, and date of the recording made. It includes more than 35 maps all over the world, which feature a great variety of sounds and field recordings. The inclusion of urban sounds and soundscapes helps to expand the aesthetic remit of soundscape recording practices, presenting them as pleasurable components of the city's sonic milieu. Echoing this trend of the urban sonic appreciation, *Sound Tourism*, is a map of "the sonic wonders of the world" (Cox, 2010).¹⁰⁴ It is advertised as a travel guide and the website is motivated by the author's intent to make people more aware of their sound environment. The soundmap's purpose is to identify places with unique sound characteristics and encourage people to become sonic tourists. In exploring a new use for soundmaps, the developer hopes to attract casual users, as the website is intended for finding places to visit, rather than just being an online library of sounds.

As a general rule, soundmaps tend to use high fidelity field recordings; and a good example of this is *Radio Aporee*, a global soundmap dedicated to field recording, phonography and the art of listening (Noll, 2006). In existence since 2006, it connects sound recordings to their places of origin, to create a sonic cartography. It follows a traditional cartographic representation, promoting sounds pinned to locations, and as a web platform and a collaborative project, it is publicly accessible; featuring an extensive archive of field recordings and being one of the longest standing acoustic communities with active members in the field. Its creator provides very specific technological tips for recording, geared at members of the public wanting to contribute to the soundmap; refusing to allow mobile uploads and insisting on entries with specific audio file specifications.¹⁰⁵ Furthermore, uploading of user-submitted photographs is not possible; the system leverages off the Google Earth and Street View functions of the Google map cartographic layer.

Locustream SoundMap follows a different approach, but again based on high fidelity field recordings (Locus Sonus, 2006). Researchers at the Locus Sonus lab in Aix en

¹⁰⁴ *Sonic Wonders* is authored by Trevor Cox, Professor of Acoustic Engineering at the University of Salford and radio broadcaster.

¹⁰⁵ *Radio Aporee* creator, Udo Noll, provides very specific tech and tips to members of the recording public wanting to contribute to the soundmap; restricting potential participants, mainly hobbyist audiophiles, to a specific recording practice.

Provence have created a map based on live microphone feeds from different contributors around the world. Except for *Locustream SoundMap*, most projects in acoustic ecology have followed, or are still following, a model of soundmapping based on the tagging of audio inscriptions. That is; recording at a given time and location; uploading to a server; and accessing recorded historical sounds via web-based technologies. *Locustream SoundMap* is an exception, in that it is based on real-time audio streaming and monitoring paradigms, using an “open mic” concept where audio streams are broadcast live and accessible via standard browsers. This map is not exclusively based on sound, as the feeds are arranged and made accessible via a stable, visual map (Google Maps). In the case of *Locustream SoundMap*, space and trajectory are projected through schematic representation; the environment is activated, and acoustic information about it is collected through feedback.

5.2.2.1 | Archival databases

Crowd-sourcing does not come only in the form of enthusiast field recordists submitting audio files. Many times, soundmaps are employed as an archive of the sonic history and heritage of the space; mapping ethnographic field recordings of the past for preservation and dissemination purposes. As heritage projects they are dedicated to sounds and soundscapes of the past; an example of this category is the *Sound Map of Dún Laoghaire*, containing sounds from old recordings of the Dún Laoghaire area, a suburban coastal town in Ireland. The soundmap was created as an online archive of field recordings, lost sounds, and sound histories;¹⁰⁶ also to document and preserve the area’s diverse and continuously changing sonic environment. Its platform offers the public easy access, rendering it a popular resource for research and educational purposes. Similarly, documenting another Irish soundscape, the *Limerick Soundscapes* project encourages people to submit their

¹⁰⁶ Developed by Anthony Kelly and David Stalling in 2013; developers invited residents to donate any recordings they might have had and asked guest recordists to contribute to the soundmap as well. The soundmap is accompanied by a blog where people are describing their own personal stories and anecdotes. New recordings and features are added as the archive grows, containing now approximately 70 recording. For every file there are certain parameters available for the user, such as sound title, duration, location, date/time, equipment, weather, description and an accompanying photo or image.

recordings to the map and to explore the sounds of the city of Limerick.¹⁰⁷ The pilot project, launched in 2013, involved recording workshops with small groups, use of recording equipment and sound editing. The sounds, mostly urban, are categorised and uploaded to a database for future access. Drawing a parallel to photography, developers assert that listening to these sounds will be as fascinating in the long-distant future as a photograph can be. They have focused on creative partnerships and collaborations with pre-existing community groups and organisations, to represent the city as a geo-acoustic project and as “a positive and democratic way to go about things” (Dillane, 2013).

Oftentimes, the collection and preservation of the soundscape is the sole project of a trained field recordist, a researcher, or an artist. *Paris Soundmap*, the product of Des Coulam, founder and curator of *The Paris Soundscapes Archive*, features a collection of around 3,000 contemporary sounds of the city, including sounds from each of the 20 arrondissements as well as sounds from some of the surrounding suburbs. A professional listener and a flâneur, Coulam walked the streets of Paris, observing through active listening and capturing sound, inspired by late nineteenth and early twentieth century street photography (Coulam, n.d.). On the other hand, the developers of *Lisbon Sound Map* have focused on three large sound territories - stable, hybrid, and in transformation - in the city of Lisbon, to monitor and record the sound marks that constitute them as historical places. The sounds are recorded at fixed stations located in places of interest, with the purpose of identifying changes in their acoustic space, which will enable stakeholders to maintain or reconstruct sound marks and sound signs.¹⁰⁸ The idea behind this soundmap is to inform communities about issues of preservation of sonic culture alongside a visual one. Even though sound files are taken from the fixed stations, developers are looking to enable artists or citizens to incorporate their sound collections on the city map.

¹⁰⁷ The *Limerick Soundscapes* portal is led by researchers at the University of Limerick who have created the soundmap, documented the process and engaged with the on-going fieldwork.

¹⁰⁸ The *Lisbon Sound Map* project is supported by the Portuguese Government (FCT). The main objective of this project has been the study of community through the recording and playback of its soundscape.

The National Library of Scotland (NLS) too has been asking “what Scotland sounds like” for the past three years; and sound archive collections have been asked to submit their sound archives via the programme *Connecting Scotland's Sounds*. This promoted the idea of “work[ing] together to hear our heritage” (National Library of Scotland, 2016) and to urgently preserve the archival field and ethnomusicological recordings, mainly because of the pressing nature of conserving dying formats. Even though the palpable aim was preservation, there has been a variety of projects connected to outreach and public engagement, as well as creating new heritage recordings. Although most of the recordings are displayed as an online archive, there are several subprojects that were developed to represent the aural “Scottishness” in the form of a soundmap, such as *Aberdeen Soundsites*, *Sounds of our Shores*, and the *Gordon Soundscape*. These examples follow the traditional gridded cartographic representation format, which allows users to upload sounds they have recorded onto the soundmap, supporting the idea of crowd-sourcing as – “providing the audio heritage of the future” (University of Aberdeen, n.d.).

Many maps in this category focus on a specific city, while others cover regions or countries, and even the globe. Nearly ten years ago, the British Library’s Sound Archive invited Britons to send in recordings of their environment for the creation of the *UK Soundmap* (The British Library, 2010).¹⁰⁹ From 2010 to 2011 they collected more than 2,000 recordings from people across the UK to create a participatory soundmap of the entire country. There are soundmaps of global accents, traditional music, wildlife sounds and many others. The project also features a blog with updates, guidelines, and recording recommendations, for listeners interested in collecting and recording everyday sounds and uploading them to the map. Then, *London Sound Survey*, is first a set of sound studies, rather than a soundmap. Its research initiatives combine field recordings with geo-spatial information, historical documentation, analytical findings and researcher descriptions (Rawes, 2009). There is extensive technical detail included, such as custom map interfaces, annotation of wildlife or other distinctive elements featured in the sound recordings, together with detailed

¹⁰⁹ Recordists submitted their audio files in response to questions such as “What does the UK sound like today?” and “What impact do these sounds have on our lives?”.

technical notes on recording equipment and other indexical information – time, place, year, as well as acousmatic description of the field recording.¹¹⁰ Here, it is the place itself which is the primary subject of nearly every soundmap recording; and the variety of sound actions contributed, is varied. This includes recordings of voices, sirens, bells, fireworks and more; while soundmap recordings are typically of ambient noises or atmospheres encountered all over London.

5.2.2.2 | Environmental soundmaps

Cartographic soundmaps are regularly deployed as environmental sound narratives, particularly in the context and practice of environmental activism, such as encouraging the public to interact with their urban context, nature or biosphere, through soundscapes. *Firenze Sound Map* is an interactive and open source tool which has become a collective soundmap, representing the Florentine soundscape from an emotional perspective. The project features audio recordings, pictures and user feedback, located in a “tender” map of the city of Florence; and place the human beings at the very centre of the theoretical discourse, reclaiming intimacy as a space for interpretation (Radicchi, 2009). Also a collective project, *Suoni di Bologna* (*Sounds of Bologna*) is a collaborative soundmap of the city of Bologna (Sounday, n.d.), that was promoted as a “sensitive noise map” open to contributions. Interested participants were invited to send their audio files, together with a short description of the recording.¹¹¹ Field recordings uploaded on the map include events and lifestyles of inhabitants and document the soundscape of the city. Focusing on a specific city as well, the *Glasgow 3D Sound Map* research project investigates the application of binaural recording technology for the creation of environmental noise maps, as a means of communicating information on environmental noise to the public (Craig,

¹¹⁰ The *London Sound Survey*, maybe because of its nature as a sound studies research depository, stretches the limits of “mapicity” by embedding logos, folklore literature, photos and other symbols in place of geographical grids.

¹¹¹ *Suoni di Bologna* (*Sounds of Bologna*) is a project organized and managed by Sounday - association for Sound Design. Sounday's methodology is oriented towards what they describe as a “holistic approach,” trying to “reconstruct, through listening, an acoustic atlas of the city which has the effect of a moment stolen from time to return the feeling of a living otherwise possible.” The purpose of the “sensitive noise map” according to its developers is to invite users to listen to the recordings in multiple occasions and re-imagine them as pieces of a puzzle, to use to reconstruct the city from memory, a sense of “rewind of the world.”

n.d.).¹¹² The goal of the soundmap is to produce detailed and specific maps of environmental noise, which enable better assessment of its impact on the population. To gather data, researchers developed a mobile phone application, allowing the personalized assessment of environmental soundscapes and encouraging public participation on matters ranging from environmental soundscape perception, to local noise policy, and understanding of sounds in their local area.

The *Nature Sound Map*, on the other hand, is an international collaboration by a group of nearly 100 professional nature recordists and provides a global database of the sounds of nature (Nature Soundmap, n.d.). It covers 81 countries, and all manner of rare species and natural soundscapes and environments. Most of the recordings in the collection are “binaural” soundscapes to ensure a realistic representation of all the sounds in a specific habitat or location.¹¹³ An urban counterpart, *Soundcities*, is an open online database of the thousands of sounds from around the world (Stanza, 2000). This is an open platform for environmental sonifications of sounds recorded, with anyone able to upload and contribute to the development of an online sound archive. The sounds can be listened to, used in performances, or played on mobile devices via wireless networks. The system is both interactive and generative; it can play thousands of sounds from around the world and is arranged into a series of maps.

Another initiative, *Biosphere Soundscape*, is a portal and a virtual (mobile, online) platform “built with three fundamental systems in mind: supporting artistic residency programs, scientific labs and international masterclasses” (Barclay, 2015). From their own description online, this initiative is aimed at enabling “biosphere-networked performance, live streaming tools, the ability to mix soundscapes in real time, and the ability to compare climates and environmental changes.” It features a map of extremely technical, high-quality recordings of natural habitats, including much of Australia’s wildlife, an Amazon Rainforest and habitats from Northern indigenous

¹¹² *Glasgow 3D Sound Map* is developed by researchers at Glasgow Caledonian University in the UK. To further enrich the experience, data sent from the application could be viewed online with an accompanying map where the public can view and audition submissions using the familiar Google map format.

¹¹³ Binaural recordings are stereo recordings made with two microphones which capture sound in 360 degrees.

communities in British Columbia, Canada, while promising that the next stage of the initiative will invite members of the public to upload natural sounds. More than anything, initiatives such as this and others briefly outlined in this section, point to a burgeoning soundscape culture evolving around the world in line with technological advancement; focusing both on urban and natural settings. And within this context, the potential of the soundwalk as aural cartographic tool, is being, and still leaves much to be, explored.

5.2.3 | Performative

Soundwalks are another way to map the sounds of a place using a variety of creative tools of the artist's choice, making it a performative sonic cartography. Usually soundwalks are live pieces in which the artist takes a group of participants through a place, to raise more awareness of the acoustic environment. Additionally, they can take the form of compositions and created for aesthetic purposes. An alternative, performative approach, focuses on the use of sound as a tool for scientific and artistic exploration, which helps the listening public to understand their relationship with the acoustic environment and the world. This idea, inspired by sound art, invites the public to experience the urban soundtrack in aesthetic terms. Echoing the tradition of the soundwalk, these maps unfold the experience of listening and navigation through space, rather than via visual diagrams. However, their ability to map facets of space is no less profound. By stepping away from a gridded map, they reveal voices that are may be silenced in traditional maps.

Within this context, Janet Cardiff's audiovisual narrative walking pieces in New York, conflate cinematic fiction with the physical immediacy of moving in real time and space. From Central Park to Carnegie Library, the artist has created unique site-specific tours that propose an alternate reality for each location, revealing an artistic approach to psychogeography. Her tours are only fully realized through the active participation of viewers and their navigation of the physical environment. With her work *Her Long Black Hair* (2004), Cardiff invites the listener to a mysterious journey through Central Park's trails, sensing the steps of an enigmatic woman with dark hair in the nineteenth century. It is a complex sensory exploration of spatiality, time, sound and physical presence, interwoven with events and sounds of both reality and

imagination, together with elements of local history, musical excerpts from opera and gospel music, as well as characteristic sounds of the environment. This soundtrack creates new links between the narrative voice, the listener and their natural surroundings. With her works, Cardiff explores how sound influences the ways in which she has perceived the world, and how, influencing the sound, she can create a drastic change in our perceptual capacity (Cardiff, 2004).

Similarly, but with a different focus, in *Electric Walks* (2004-), Christina Kubisch organises a series of public walks with special headphones, which amplify and make different electromagnetic fields heard.¹¹⁴ The accumulated sounds of electromagnetic noise, their harshness and intensity vary from space to space; and participants are invited to listen to lighting systems, anti-theft alarms, traffic monitoring cameras, computers and cell phones, antennas and ATMs, etc. When these sounds are perceived, they invite listeners to experience an alternative exploration of urban centres, offering a different perception of everyday life (Kubisch, 2004)

Another initiative, *Soundwalking Interactions*, is a research-creative project led by Dr Andra McCartney, which questions the dynamics of sonic works that are produced from soundwalks (McCartney, 2010). The soundwalks are designed through the preliminary exploration of a specific urban site; exploring the richness and variety of its sonic environment, taking into account the role and importance of particular sounds and ambiances, and thinking about ease of access for people taking part (McCartney & Paquette, 2012). Participants are encouraged to conceive of listening as a framework that can be both analytical and playful. Post-walk discussions employ an open-ended format, in which participants are invited to speak about their listening experiences. Here, team researchers become involved in the discussion and attempt to encourage participants to talk about their listening experiences, facilitating

¹¹⁴ Christina Kubisch's Electrical Walks, for instance, raise "socially-oriented" questions about space and place; and of the invisibilized presence of technological infrastructures in social life. Indeed, in an interview with Cox, Kubisch explicitly (though perhaps unintentionally) foregrounds the racialization of listening: when asked about hearing voices when participating in Electrical Walks, Kubisch recalls an experience in Switzerland: "I came across a group of people – I think it was a group of Indian people – celebrating a religious service in their own language. Because I didn't understand the language, at first, I thought it was some kind of terrorist meeting, with all this shouting and these rhythmic sounds. But then I heard the "Hallelujah" and "Amen" and I understood what it was." See Cox and Kubisch, *Invisible cities* (Thompson, 2017b).

additional connections between participants and potentially with other people who possess a particular sonic knowledge of the location; thus, producing a collective soundmap. Indeed, the creation of soundmaps has also entered a compositional dimension, which is described in the next section.

5.2.4 | Compositional

Compositional soundmaps are informed by the practice of soundscape composition, which can be described as the creative remix of emplaced aural experience. The aim here is to re-educate the senses via multimodal listening and the composition of sonic experiences. Soundmaps in this category reimagine field recordings, with varying degrees of manipulation and compositional liberties; then released as a collection of real and imagined soundscapes, much like an album or taking the form of an installation. Such “situated composition” (Thulin, 2017) brings together and acknowledges the impact that social, material, spatial, virtual and digital elements have as co-composers of soundmaps and of each other. The aim is to bring attention to the ways in which sonic and social space are co-composed by these composing forces in play.¹¹⁵

Operating in this domain, *Cities and Memory* is a global field recording and sound art project, which by “remixing the world one sound at a time” defines itself as a global artwork (Fowkes, 2014).¹¹⁶ The public is encouraged to interact with environmental sound via themes, while re-imagining the soundscape through original field recordings, as well as through experimental sound art or music compositions. The project is curated, open to submissions and the developers often introduce special global collaborations. Since this is a curated project, it does not function as merely a global soundscape archive, even though there is a grid view; and the participatory structure is transparent, mostly comprising sound artists and hobbyist recordists, but

¹¹⁵ Situated composition draws on Donna Haraway’s (1988) concept of “situated knowledges,” which stresses the importance of social, historical and political circumstances for the production of knowledge, arguing that there is no objective all-seeing view from above. Identifying the flaws both in totalising claims to knowledge and in relativism – views from nowhere and everywhere, respectively – Haraway points to the partiality and particularity of knowledges and how they are grounded in specific situations.

¹¹⁶ *Cities and Memory* project presents both the present reality of a place, but also its imagined, alternative counterpart – remixing the world, one sound at a time.

not exclusive to them. *Cities and Memory* also has an active presence on popular social networks, which attests to the collective's commitment to serve as a public knowledge resource; offering how-to record and edit sound guides and resources aimed at a general audience. And apart from the promotion of high-fidelity sound, it promotes an awareness campaign of sonic environments that is primarily aesthetic and apolitical.

As another exploration of urban space, Chris Watson's *Inside the Circle of Fire: a Sheffield Sound Map* is a soundmap by way of composition (Watson, 2013).¹¹⁷ Here Watson attempts to take the listener on a journey through his hometown, Sheffield, by using ambisonic diffusion to immerse the listener in his soundscape of field recordings, collected from all over the city. In this sense, field recordings and soundscape composition are doing geographical work outside the usual academic repertoire of texts, numbers, maps, or images. And the idea behind Watson's soundmap, was to explore the potential of recreating a sense of place and sound of his hometown; and to deal with the changing aural landscape of Sheffield. Watson also received an interesting collection of submissions both from members of the public and fellow sound recordists. Here, a similar vein to Watson's can be found in Matthew Barnard's *Woche (with apologies to Ruttmann and Brock)* albeit using a different method (Barnard, 2009). This piece is a document of a week in central London, with no necessary continuity in terms of time or place. However, if we allow the term soundmap to be broadened, then we have a composition that maps and represents the experience of the busy city, using material recorded binaurally. The audience plays the part of the recordist and experiences the acoustic environment as accurately as the creator did, being placed into the same location/moment of recording as the recordist.

Of course, the various ways of combining sound and cartography are not mutually exclusive. Marcus Leadley's field recordings are compiled into a randomised composition, with the output sent to a radio transmitter and listeners required to wear wireless headphones; exploring the places that are appear randomly in the

¹¹⁷ Chris Watson's *Inside the Circle of Fire: a Sheffield Sound Map* was installed at the Millennium Gallery in Sheffield.

soundscape composition (Leadley, 2012). It thus combines performative and compositional soundmapping ideas. Indeed, maps do not necessarily inherently fall into one category or another, as they are always made meaningful in specific contexts. All these different approaches to soundmapping provide exciting potentials for sound studies and sound art, geography, anthropology, and many other disciplines. Through the possibility of forging connections between map-maker, map-user, place, and human-non-human agents, soundmapping can function as a systematic method for investigating the role of sound in social life. These ideas then, informed the next two projects discussed, which were part of a course offered to master's students at Edinburgh College of Art (ECA) studying digital media and sound design, Digital Media Studio Project (DMSP). As the supervisor, I worked with two different groups of students, developing *SoundTag* (Talianni, 2016) and *Exposing the Invisible City* (Talianni, 2017) in 2016 and 2017 respectively, as two projects that draw on visual, cartographic and compositional methods of soundmapping, using digital media.

5.3 | Soundtagging the Invisible City: two case studies of experimental cartographies

Inspired by the concept of the flâneur, *SoundTag* was developed as a map-based, sound sharing, collecting and editing mobile application, advancing a new spatio-sensorial vocabulary (Psarras, 2013) so as to re-think spatial representation through theory and practice of creating a soundmap.



Figure 32 - SoundTag launch poster, April 2016

The tools used were sound, image, text and maps, to create an experience of immersion in a hybrid environment between material and potential reality. For this, multiple levels of the constantly transforming notion of public space were employed, such as the structured environment, social networks, digital communities, virtual environments and such like.

The aim here was to shift the focus from the visual to the aural, by inviting users to rethink their experience of place through social and playful sonic interactions. The underlying principle of the app that students prototyped, thus was to have a sound-based experience using geo-locative technology (GPS/Bluetooth/Wifi).

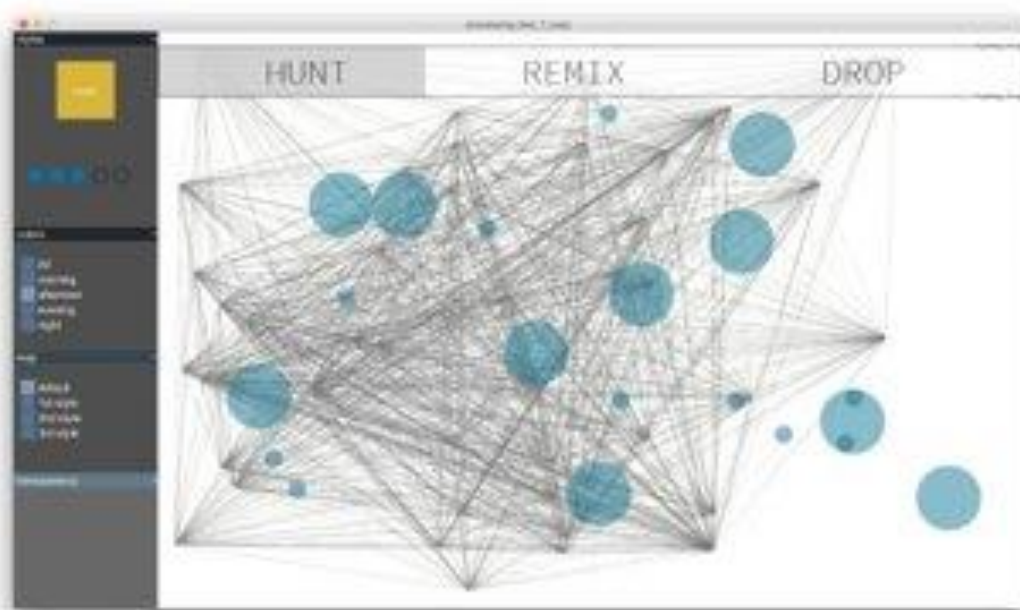


Figure 33 - SoundTag app interface, April 2016

Tagging translated to *SoundTag* in the form of “dropping” sounds of any kind on a map, as a way of sharing experiences based on location. In essence, *SoundTag*’s objective focused on giving users multiple options for interactive experiences, along with the idea of compositional interactivity – body movement as a tool for composition – allowing for small sonic ecosystems to develop.

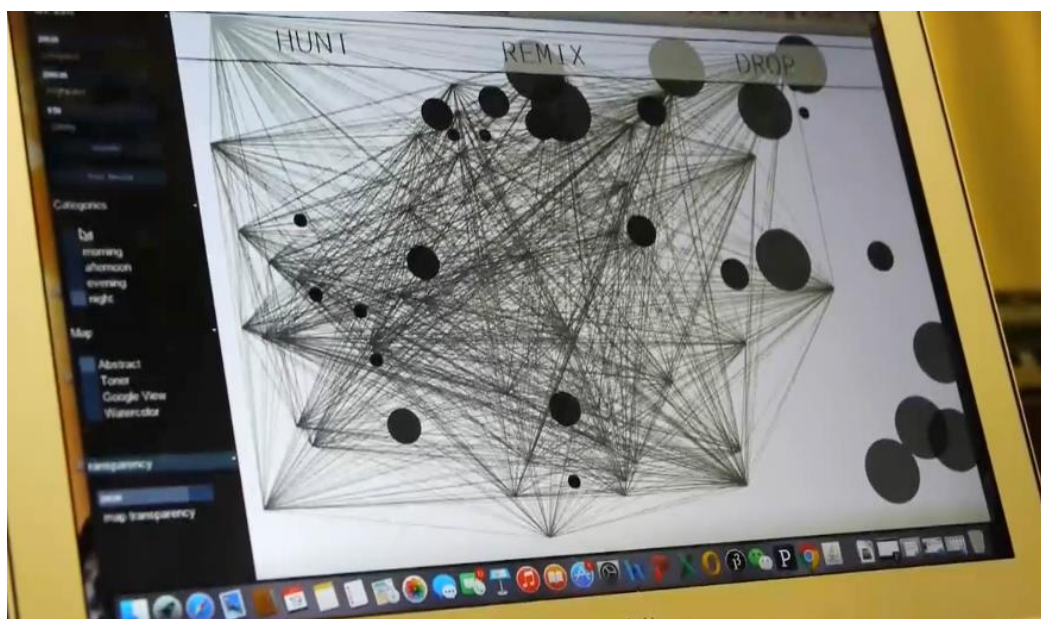


Figure 34 - SoundTag interactive soundmap interface, April 2016

Sound compositions and field recordings were combined with the user's natural environment, giving voice to buildings, streets, and people living in the area. At the same time, the sound came to the forefront of experience, with memories, routes, routines, becoming heard. Ultimately, such environmental audio practices, featuring field recording and audio walks, examine how human-bodily effects arise in encounters with audio technologies and landscapes (Gallagher, 2016).



Figure 35 - SoundTag developers conduct a listening walk/field recording expedition, February 2016

In this, *SoundTag* users are sonic flâneurs, encompassing the auditory self, which is also an embodied self that responds and re-sounds. As listener, musician, sound artist or sonic flâneur, the user can be positioned as a boundary point that impedes or stops the flow of music and sound. Equally so, as being potentially initiatory in relation to sound and music i.e. as much agentive and mediating, as mediated. Indeed, at the base of this project was the conviction that “perhaps the most important distinguishing feature of auditory experience ... [is] its capacity to ... reconfigure space” (Connor, 1997, p.206).

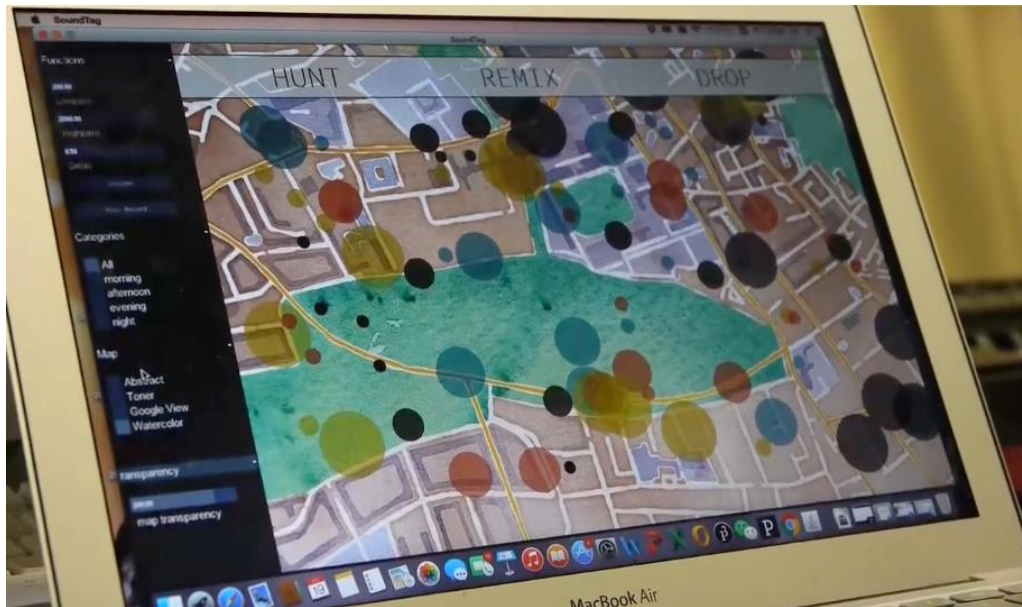


Figure 36 - SoundTag interactive soundmap and app launch, April 2016

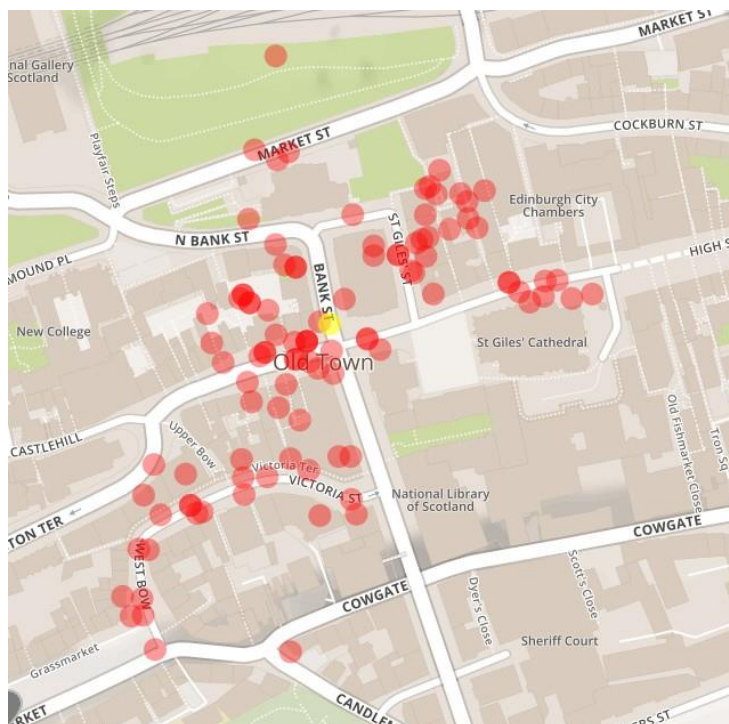
With the development of modern sound media, according to Steven Connor, “the rationalized “Cartesian grid” of the visualist imagination ... gave way to a more fluid, mobile and voluminous conception of space ... Where auditory experience is dominant, we might say, singular, perspectival gives way to plural, permeated space. The self, defined in terms of hearing rather than sight, is a self, imaged not as a point, but as a membrane ... a channel through which voices, noises and music travel” (ibid). And it is this notion that was further explored in the 2017 DMSP project *Invisible Cities*. The book *Invisible Cities* by Italo Calvino was the inspiration for the student project with the same title, which was aimed at understanding the relationship between the city as usually shown and the invisible elements that fulfil the individual experience. As Calvino explains,

words were more useful than objects and gestures in listing the most important things of every province and city [...] and yet when Polo began to talk about how life must be in those places, [...], words failed him, and little by little, he went back to relying on gestures, grimaces, glances. (Calvino, 1974, p.39).



Figure 37 - The Invisible Cities: Mapping the Invisible project, January-April 2017

So even though a city can be understood through words or concrete representations, it is not possible to experience it solely via references to such components, due to all the invisible elements that complete human perceptions.



Row: 531
Time: 2017-03-10T11:39:09
Valence: 86.04651%
Frustration: 100.0%
Focus: 51.162792%
Excitement: 60.930233%

Figure 38 - Exposing the Invisible City: a brain-driven audiovisual walk | The overall route

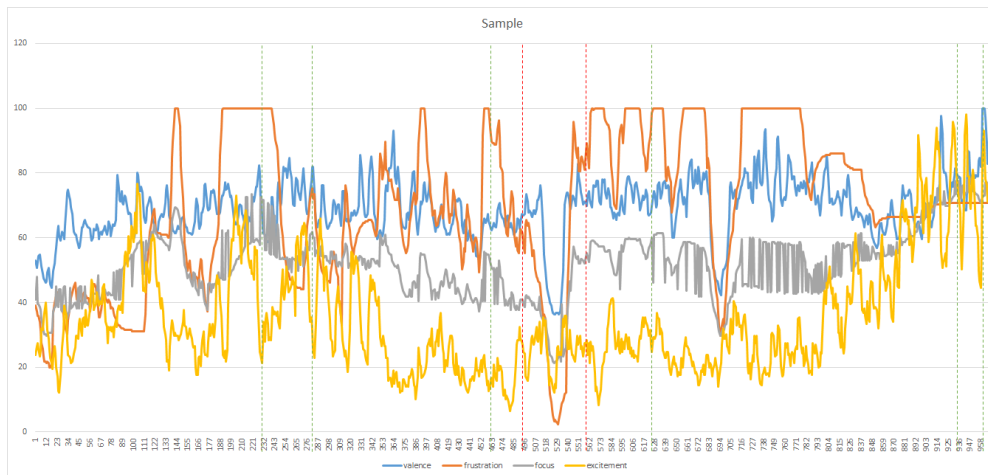


Figure 39 - *Exposing the Invisible City: a brain-driven audiovisual walk* | Route partition, data partition, timecodes and task distribution, April 2017

Inspired by this idea, the audiovisual art installation *Exposing the Invisible City: a brain-driven audiovisual walk* was thus an attempt to detect the hidden aspects of urban life and to reveal something invisible; in our case, emotions during a walk. This then created an artistic representation of the interaction between the lived body and the urban environment, in the form of an audiovisual installation. In exploring the relationship between emotions and the city, the group USED an EEG - the abbreviation of Electroencephalography - headset to collect affective data from participating subjects, in order to address the problematic nature of separating lived experience from cartography. This approach is widely used to monitor a series of activities in the human brain. The students measured the affective response of different experiment subjects when walking a predefined route in the city centre of Edinburgh. The data was merged and analysed for the visualization and sonification of the walk, resulting in an audiovisual piece that links images and shapes to emotions; and which indeed translates the inaudible into the audible, to reinterpret the route and provide an alternative mapping.

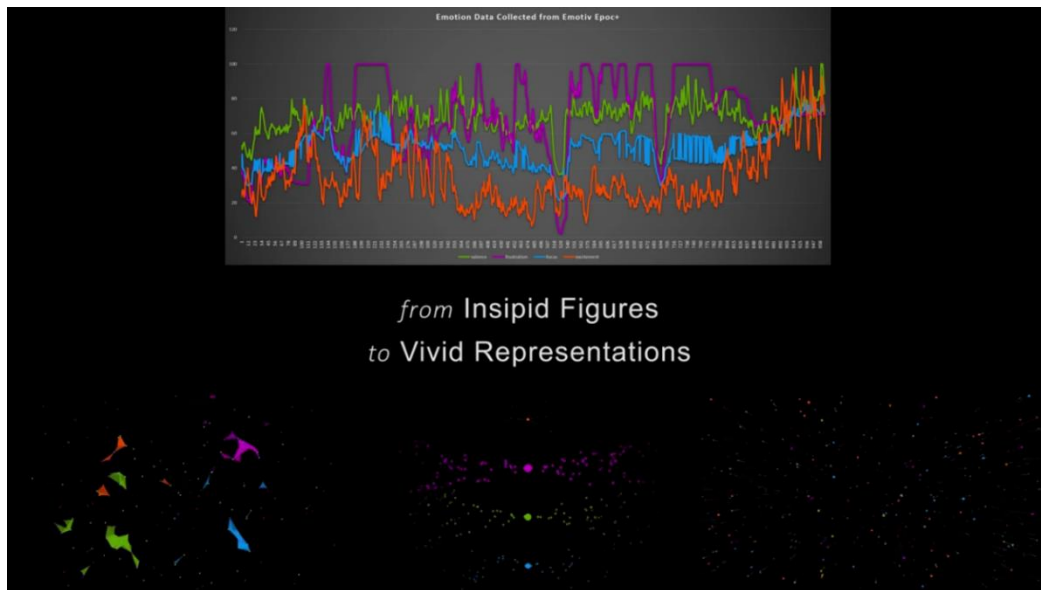


Figure 40 - Exposing the Invisible City: sonifications & visualisations, April 2017

In this, the installation operated as an emotional cartography, displaying the feelings of a subject when walking in the city, in the form of a transmedia based art piece that deployed visualisation and sonification techniques. In this artwork, human emotions feature as important elements of sonic milieus and the sonification of data was understood as a means of producing art, as well as an art form in itself; using the EEG data as a sort of score. By using a definition of sonification that sees it as a way of using non-speech sound to represent data, and combining this with the implicit aesthetic considerations of an art installation, it opened up its meaning to the use of scientific data as a way of creating an emotional soundmap (Cobussen et al., 2017). In that way, this transmedia installation, which acts as a map and an artwork, was seen and understood as a means to expand the idea of mapping; a mode of artistically representing the places that the experiment's subjects had visited during the data collection/soundwalk stage, using affective data. The map unfolds in the experience of listening and navigating through space.



Figure 41 - Exposing the Invisible City: the map and the emotions, April 2017

5.4 | Audile techniques for experimental cartography

The idea of “lending a musical ear” to the soundscape, to develop audile techniques (Sterne, 2003) for addressing urban sound space, is compelling and has inspired attentive listening practices, while generating critical dialogues about soundscapes.¹¹⁸ Soundmaps intend to expand the practice of deep listening, contributing to a better and overall more inclusive experience in urban settings. They can be used as a qualitative tool to be integrated with the quantitative methods generally adopted by traditional acoustic and urban planning, wherein the sound environment is mainly explored from a quantitative standpoint through noise maps. In terms of methodology, soundmaps can function as a technique to sonically study a

¹¹⁸ According to Sterne, the practice of listening in private auditory space was not so much the result of the capitalization and commodification of sound by sound-media industries, but of earlier audile techniques developed by doctors employing their stethoscopes and telegraphers using “sounders” (Pinch, 2004, p.644). Sound-reproduction technologies only “disseminated and expanded these new technical notions of listening through their own institutionalization” (Sterne, 2003, p.98). This extensive dispositional framing of our auditory senses might be described as *audile techniques* (Sterne), *modes of listening* (Chion), or *sonic skills* (Bijsterveld). Sterne touches on some very important distinctions in this definition: the separation of sound and space and the necessity of practice and practical knowledge (Powell, 2008, p.9). Sterne’s concept builds on Marcel Mauss’ “techniques of the body,” that is, the various ways in which the body, “man’s first and most natural technical object”, is trained and cultivated into the performance of actions. Sterne extends these techniques of the body to include sensory activities, such as listening, looking, tasting, and so forth. These new audile techniques involve bodily training and, in turn, bodily training shapes audile techniques (Kane, 2015, p.8).

city or the “sonic places in the city that are sonically coherent enough to be studied” (Lappin & Ouzounian, 2015). As such, they are valuable tools for developing an awareness of urban sound spaces and aid in the development of concepts for future city sound environments. For example, the tradition of the “Songlines” (Chatwin, 1987), a system for navigating through, and connecting to, their ancestral land among Australian Aborigines, can be translated into experimental soundmaps of urban space; creating “music” from its topography and initiating discussions on how we navigate, experience and represent the global society of the public domain.

Seen in this way, engaging in soundmapping activities thus describes a vast range of ways that support a constructive attitude toward sound quality; encouraging sonic thinking for sound planning. And this is not just in a sense of directly designing or producing sound, but also as influencing the physical, social and infrastructural elements that lead to the possibility of particular sonic situations or sonic ambiances arising. Soundmapping might also include built structures that condition acoustics, as well as explicit or implicit rules guiding audible behaviour. Among other uses, they can be employed as a tool of social critique, aesthetic inquiry, and can also be aimed at providing a situated experience.¹¹⁹ This situated perspective is like a sonic version of Google Street View, but also different, in the way that Tim Ingold (2000) has identified the difference between the “taskscape” – the realm of activity and mobility, which is most promptly perceived through sounds – and the “landscape,” which constitutes fragmented forms of the taskscape.¹²⁰ In Google Street View we see landscape, architecture, and the mute, frozen movements of vehicles and people. Through sound recordings though, we hear those movements in those spaces; and the element of temporality that is present in the soundmap, can ultimately propose new readings of space.

¹¹⁹ The inherent act of bringing sound to the map, to present a more situated perspective on place and a situated listening experience. The role of the body as the site of knowledge production is central in Haraway’s *Situated Knowledges*, however its role is complex and multi-faceted. Haraway’s version of feminist embodiment is not a simple or merely literal foregrounding of the physical essentialised body. The complex and contradictory view from the body foregrounds both situatedness and embodiedness for Haraway.

¹²⁰ The “taskscape” is an array of related activities: it is a socially constructed space of human activity, understood as having spatial boundaries and delimitations for the purposes of analysis (Ingold, 2000).

Soundmaps are also effective in marking the auditory politics of noise and silence. The contemporary understanding of noise sprawls on two worlds: there is “the qualitative sensation and subjective judgement on the one hand, and the quantitative calculation of objective probabilities on the other” (Braidotti & Hlavajova, 2018, pp.287-290). The former depends highly on context and may concern unwanted sound or irrelevant information; the latter is also concerned with the analytic framework. There are several varied quantitative understandings of noise deriving from its haphazardness and unpredictability, “including low-resolution transmission, informatic theoretic and psychoacoustic models, the analysis of noise into various colours corresponding to generic spectral densities in frequency distribution, chaos theoretic conceptions of nonlinearity, perturbations below the threshold of measurement, stochastic resonance and turbulence” (ibid). According to Marie Thompson, it is unclear what is denoted by the term noise, as it is too vague, and simultaneously obvious and evasive (2017a). With the continued desire for sonic control over one’s own home, existing in tension with noisy soundscapes of urban milieus, there are various projects researching what sounds people enjoy; emphasizing the importance of positive sound environments in urban planning. These are usually run by urban planners and researchers, who work with communities to identify positive and negative components of their acoustic environment; subsequently developing a terminology for the expression of auditory appreciation of particular sound environments. Also, there is a positivist approach to soundscape that is informed by Acoustic Ecology; but which through an engaged and analytical listening practice, seeks to undermine Acoustic Ecology’s rigid ideological hierarchies, in the sonically inclusive spirit of the act of hearing itself (Cobussen et al., 2016; Thompson, 2017a).

In mapping the soundscape of the city, soundmaps also bring to the foreground the blurring of the public/private sphere. More and more of what appear to be public spaces, are in fact privately owned, in what Sennett terms as “dead public spaces” (2017); hence the content of urban soundmaps focuses on outdoor locations and spaces that are understood to be public spaces (Vasagar, 2012).¹²¹ Although such

¹²¹ Privately owned public space (POPS), or alternatively, privately owned public open spaces (POPOS), are terms used to describe a type of public space that, although privately owned is a pseudo-public space; such as squares and parks that seem public but are owned by corporations, which have quietly

spaces are seemingly accessible to members of the public and have the look and feel of public land, these sites – also known as privately owned public spaces or POPS – are not subject to ordinary local authority bylaws. Rather, they are governed by restrictions drawn up by the landowner and usually enforced by private security companies. Such gentrification interventions, which appear predominantly to be policies of redefining the character of urban public space, are extending its implicit or explicit privatization (Stavrides & De Angelis, 2016).¹²² According to Stavrides, gentrification is chiefly a visual process, promoted and established in city space through policies heavily dependent on the manipulation of images. The resulting visualization of public culture moulds not only space, but also the collective identities of gentrified city inhabitants. City soundmapping projects that listen to city spaces, private, public or POPS, are thus seen as also re-enabling the radical potential of the in-betweenness of public space. Additionally, listening to the city can mould sonic identities that are open and shared, instead of bounded identities, which define enclosed urban settings of collective consumption.

In this, Waldock (2011) has worked with urban communities, producing sound diaries and portraits of urban soundscapes. Indeed, the work engages with a demographic that typically remains unheard within contemporary participative soundscaping practices like online soundmapping. These are for example, recordings made by female residents of an area of Liverpool known as the "Welsh streets;" as well as by children at a pre-school facility, in collaboration with the Vauxhall Liverpool Sure Start Centre. But could these series of events be part of a "reclaiming the city" agonistic intervention? How can they be connected to anti-gentrification struggles? Waldock argues that that we need to move beyond the purely technological solution of the hi-fi sound, to working "at a community level" (ibid), reaching out to a larger

spread across cities worldwide. Over the past decade, large parts of Britain's cities have been redeveloped as privately-owned estates, but these developments appear to be entirely public to casual passers-by.

¹²² Gentrification policies are predominantly devoted to ensuring that an urban environment is as secure and as deeply immersed in consumption culture as it can be. Gentrified venture does not allow space to be used or appropriated by "deviant" users. Unauthorized street merchants, beggars, "illegal" immigrants or skaters and graffiti "villains" are chased out of the gentrified neighbourhoods either by police controls or by ingenious uses of public furniture and lighting (Stavrides & De Angelis, 2016).

demographic, to create soundmaps that will be able to challenge the preconceived norms attributed to them.

Within this context of mapping the soundscape of the city, the soundmap can be viewed as a “restructuring force” the properties of which include “persistence, replicability, scalability, and searchability;” producing the dynamics of “invisible audiences, collapsed contexts, and the blurring of public and private” (Boyd, 2008). The ensuing socio-cultural changes in the patterns of listening, modes of perception, and interaction with our technologically extended world, which is bestowed by the popularity of soundmaps, therefore contributes to an increased blurring of boundaries between public and private, reality and virtual simulation.

Contemporary soundmaps can also function effectively as archives, since they are potent in transmitting a large amount of sonic information in a way that can be easily represented; becoming a “permanent researchable resource” (*UK Soundmap*), an “auditory archive of an environment” (*Montreal Soundmap*), or “a historical record and subjective representation of the city” (*New York Soundseeker*). The possibilities afforded by recording equipment in the form of inbuilt smartphone microphones and recording software, (becoming much more widely available in the early 2010s), resulted in the development of many crowd-sourced soundmaps.¹²³ In this sense, soundmaps can be said to overcome access barriers and “democratize” cartographic practices. Qualities and terminology such as “participatory” and “bottom-up,” are of course linked to the blurring of consumption and production, which has been theorized through terms such as “produsage” (Bruns, 2006), and “prosumption” (Ritzer & Jurgenson, 2010). They are however not equivalent to the idea of “democratic” radical mapping (Droumeva, 2017); and oftentimes, the idea behind archival soundmaps deflects towards documentary and conservationist agendas, related to heritage and preservation. In that, soundmaps as knowledge products “constitute particular choices and absences in what is represented” (Waldock, 2011). They can reflect a variety of interests and concerns, from archival, historical, and cultural studies of cities, to socially oriented and networked mapping projects, to

¹²³ Around 80% of the recordings contributed to the *UK Soundmap* were made on mobile phones.

creative works that bring soundmapping into dialogue with artistic traditions or urban struggles. However, as will be shown below, there are different political and methodological implications, which have fuelled scholarly critique in response to the recent hype associated with the potential of soundmapping (Droumeva, 2017).

5.5 | Soundmap critique

In many ways, soundmaps have indexical qualities. These are however predominantly distilled through too many haphazard considerations to be conceived as actually representational. Key to this is that sound is foregrounded for its ability to breathe both a sense of temporality and spatiality into Cartesian grids (Anderson, 2015; Thulin, 2016). And it should be remembered that soundscapes unfold in time; and thus, aside from offering at-a-glance view of geographical place, they are also experienced in time. Therefore, a first point of critique about soundmaps is that they try to objectify the auditory, ignoring its inexorable entanglement with time; offering instances of moments frozen in time. Yet, as Kim-Cohen explains, it is impossible to capture a “sonic freeze-frame [...], the sound occurring at the moment of interruption does not hang, object-like, in the air, but evaporates, recoverable only in memory” (2009, p.223). Ephemerality of sound as a medium here contradicts conventional ideas of mapping; and indeed the very notion of the soundmap as a collection of frozen recordings of place, is viewed as an oxymoron (Ceraso, 2010). Thus, the main critique of the soundmap centers on its failure to capture the embodied experience of encountering sound in its original environment, and to effectively communicate the dynamism of the sonic environment.

Another critique concerns the limits of sonic representation. This hinders soundmaps’ potential to express cohesive ideas of soundscape and to provide enough context to enable its meaningful interpretation (Ouzounian, 2014). Thulin affirms those limitations, by positing that a complete topography of sound is impossible; “we cannot ‘zoom out’ to *listen* to the entirety of the sounds on the surface of the Earth” (2016, p.12, italics in text). Soundmaps contain sonic snippets of real life, which are sometimes difficult to identify in the absence of other sensory parameters. When we listen, we do so with our whole body by actively drawing from our own thoughts, associations, and emotions; all of which shape our individual listening experience. The

visual representation of sound on a map fails to capture the memories associated with the sound, giving primacy to a disembodied listening that conceals the subjectivity of listening in place. For this reason, the listening experience becomes an abstract representation of reality; with acoustic recordings producing a space that exists only in the mind of the listener, in accord to the phenomenological perception approach of recorded time-moments. The disembodied listening experience of a soundmap, in some ways disconnects listeners, so that any meaningful engagement beyond listening to field recordings that are tagged on a map, is effectively extinguished for certain audiences.

Richard Coyne, in his investigation of what he calls the “tuning of place” (2010), enquires into sound’s capacity to make humans equal actors in engaging with space. Coyne constructs narratives that present the impulses of collective tagging, or *folksonomies* (p.xxv) towards the self-construction of individualised places. In such impulses, whose material encounters are engaged through the help of resources of networked media, tags take a prominent role in the participative move to adjust the environment by making minor local interventions: “putting your own label on a thing” (ibid). Tags facilitate tracking and mapping; however, by reducing the sound to a tag - of any level of sophistication - may on the one hand help identify and indicate ownership (p.108), while on the other, promotes an idea of the sonic environment as something that can be owned and authored. This may encourage the potential for a type of (sonic) enclosures that produce “enclosed identities,” in the vein of “defin[ing] enclosed urban settings of collective consumption”(Stavrides, 2016, p.142), as discussed earlier.¹²⁴ In the enclosed and gentrified urban space, identities are performed, and gentrification projects thus “mould not only space, but also the collective identities of ‘gentrified’ users” (ibid). Such sonically enclosed identities have the means to control the sonic environment by producing an exclusionary urban

¹²⁴ According to the Marxist tradition, the “Enclosures” were the starting point of capitalist society. They were the basic device of the “original accumulation” which created a population of workers “free” from any means of reproduction and thus compelled (in time) to work for a wage. The Enclosures however are not a onetime process exhausted at the dawn of capitalism. Today, once again the “New Enclosures,” are seen as radical in their attack on what proletarian struggles in the course of history have imposed as human rights and a common denominator of proletarian experience across the globe.

auditory scenery, “[cleaned from the impurities constantly generated by social antagonism,” even though they can appear as “inclusive and plural” (ibid).

Another, most significant critique, perceives soundmaps as a means of controlling sound; a way of imposing power on the sound, by degrading it to a symbol on a two-dimensional representation of space (Anderson, 2015; Droumeva, 2017; Thulin, 2016; Tschirhart, 2013; Waldock, 2011).¹²⁵ Herein, if sound is understood as kinetic motion that affects bodies - shaping their capacities - it fits Foucault's definition of power as action/s whose effect is to shape other actions (1983). In this, whilst Foucault famously wrote of how disciplinary power is exercised through technologies of visibility, sonic technologies are also widely used to regulate bodies and spaces. Indeed, soundmaps can reiterate recording culture norms that reproduce divisions of gender, class, and race; while the need to map environmental sound, articulated at nearly every institutional level —international, national, and local—highlights associations with Foucault's notion of “biopower.”¹²⁶ As such, “biopower” is the term he uses to describe new mechanisms and tactics of power, focused on human populations and bodies; themselves emerging from historical configurations of power and knowledge and their transformations. Foucault distinguishes such mechanisms from those that exert their influence within the legal and political sphere of sovereign power (Tschirhart, 2013). This new sort of power is not the familiar hierarchical, top-down power, symbolized by the sovereign or the oppressor; it is a horizontal network

¹²⁵ This “minor” practice is a concept developed by Gilles Deleuze and Felix Guattari to describe the transfer of power back-and-forth among symbolic forms of authority, including language and other representational systems. The concept of the “minor” has resonance here because of the way soundmaps act within the dominant discourse of soundscapes.

¹²⁶ Michel Foucault coined the term “biopouvoir” (“biopower”) to describe power as it concerns human life, regarding the human body on one hand and human populations on the other. Historically, biopower emerged with the transformation of power formations in Western societies starting in the seventeenth century, but the most drastic transformation took place during the nineteenth century. This transformation consisted of various techniques of power, of various ways of administering life. Foucault claims that this new power over life, that is biopower, evolved in two forms, which he called anatomo-politics of the human body and biopolitics of the population. The first form of biopower, the anatomo-politics focused on the human body as a machine and sought ways to discipline it, to make it both useful and docile, as it was integrated in the new economic system of industrialized societies. The second form of power, the biopolitics of the population, was concerned with managing human populations, i.e. managing reproduction, births and deaths, behaviour, and health and sanitation. Biopolitics of the population consists in all sorts of techniques to intervene in and control populations. These interventions require the collection of enormous amounts of data about populations, analysis of the data and, finally, production of knowledge (Arnason, 2012).

of power relations. This power is not something that the powerful have and the powerless lack, as it only exists in action. It exists precisely in acts that have effects on other acts (Arnason, 2012, p.295).

In the technological enablement of action, it has brought the invention of geolocate media that has enabled artists to spatially grid recordings of sounds within artistic projects; and communities can easily record and upload their own recordings, taking advantage of new technologies' capacity for community engagement. In theory, this enables communities and individuals to create soundscape archives that publicly share their interests and identities, thus democratizing shared narratives of place and space. However, as Droumeva's critical approach to sonic cartography argues, many soundmaps have unrealistic goals (2017). While habitually presenting themselves as highly participatory and publicly engaging - with an implied democracy of access and contribution - in practice, they often reiterate norms, divisions and limitations of recording culture; reproducing divisions of gender and class, and those between the domestic and public, private and collective, and poor and well-resourced. Indeed, the relatively international ubiquity of the digital, imparts both local and global barriers to, and opportunities for, diverse perspectives. That considered, the idea that plurality equals democracy is also proving to be a myth constructed in the discourse of neo-liberalism (ibid). The reality of most crowdsourcing digital culture, soundmaps included, is much less diverse. This is precisely why the production of public knowledge via crowdsourced initiatives needs to be considered as a discursive system of practices, representations, values and power.

Within such a contextual space, we can approach online soundmaps as one result of the profound changes brought about by the proliferation of the digital, which in turn affects the way we become, and express, ourselves as citizens. One approach to the question of digital citizenship, focuses not so much on the terms of individual participation, but rather on the "infrastructure" or "technologies" of democracy. Here it can be argued that the "democratizing" effects of crowd-sourcing have been discussed in simplistic terms (Braidotti & Hlavajova, 2018, p.102); promoting the idea that plurality equals democracy - a myth sustained by the logic of neo-liberalism. Therefore, if certain (crowd-sourced) soundmaps do play a role in political dynamics, it is essential to understand these platforms themselves as institutions and develop

“explicitly *critical* practices of representation” as Droumeva argues (2017, p.5, italics in text). In this sense, we need to interrogate the affordances of such soundmapping platforms and to understand them as “technologies of the public;” capable of shaping public discourse, by being brought into contact with notions of the public sphere. These new public spheres and discourses are characterized by the emergence and transformation of modes of expression and communication; blurring between reception and production, as well as the structure of dissemination, debate and production of meaning, through online soundmap platforms.

Many soundmaps share the participatory ideals of Schaferian acoustic ecology, aiming to engage amateur sound recordists and make sonic research available to the public. In this though, phonographic traditions and hobbyist field recordings that draw from the hi-fi culture of the 1990s, appear to characterize the digital elites primarily contributing to projects of sonic cartography (Thulin, 2016). This may be partly because audio quality has a significant impact on whether people believe what they are hearing. In this, recent research in the field of Science and Communication Studies are conducting experiments, examining the processes of separating fact from fiction in the digital age and questioning how audio quality relates to perception and information processing (Mujezinovic, 2018). Two separate experiments were conducted with two groups of participants, who were invited to listen to scientific talks in good and bad audio quality. The results clearly showed that those who listened to poor-quality recordings consistently evaluated the scientists, as well as their research, less favourably. The same happened when they repeated the experiments, this time providing information such as affiliation and credentials of speakers (Newman & Schwarz, 2018).

In many ways, good audio quality is associated with “the ideals of hi-fi as intimately connected both with the escapist affects of middle class masculine domesticity” (Sterne, 2013, p.188). Interestingly enough, many projects invite users to submit smartphone recordings, which in theory do not fulfil the high-quality field recording criteria that characterise the highly masculine technological domain of high-fidelity culture. Yet, as Waldock (2011) points out, the group that dominates online soundmaps is male (70%), mostly between the ages of 20–50; and she ponders on how this might contribute to a particular recording culture that limits the aspects of

the sound environment that get to be represented. This recording culture strongly resonates with the ideals of hi-fi sound emerging from the post-war cultural complex, with the hi-fi boom representing somehow a rejection of the mass, feminized tastes embodied by television (Sterne, 2013). From the rarefied perspective of the well-equipped “man-cave,” high fidelity is thus presented as a masculine, cultivated and sophisticated art, whereas lo-fi sounds are portrayed as feminine and belonging to mass entertainment. The same logic of gender, domesticity and of public/private divisions, is thus arguably reproduced by soundmaps that favour high fidelity recordings.

In investigating this issue further, Waldock examined the soundmap’s relationship to issues ranging from gender, to the domestic and public, private and collective, poor and well-resourced. Here she criticizes soundmaps for foregrounding public sounds, as opposed to private or domestic (2011); bringing into discussion the separation of public/private experience of space as echoed by feminist geographers like Doreen Massey, who argues that space and place are important in constructing gender relations.¹²⁷ The construction of “home” as a woman’s place, Massey observes, is coded female, viewing the place itself as a source of stability, reliability and authenticity (1994, p.180). The private experience of space is mostly absent from every soundmap, regardless of whether it is crowd-sourced or commissioned. In various soundmapping projects’ sets of instructions, unlike with sound quality for example, we do not see any restrictions on the place (public or private) of the recording; yet the private audio sphere is regularly misrepresented. Here, Massey’s claim that “spaces and places are not only themselves gendered but, in their being so, both reflect and affect the ways in which gender is constructed and understood” could be used to explain the reasons for such fabrication. After all, as Massey goes on to argue, “this joint control of spatiality and identity has been in the West, related to the culturally specific distinction between public and private” (p.179). Economic factors also influence participation in these projects, since contribution is predicated on

¹²⁷ Relevant debates include the “personal is political” mantra of second wave feminism, the significance of the private/public divide within family law, which can be seen in the work of Elshtain (1981) and Kelly (2003) in their questioning of the family as private, and the exclusion of private voices in public/political spaces.

access to some form of recording technology and the Internet. As with the issue of gendered participation, this economic delineation may subtly influence the types of sounds that are recorded.

Waldock's critique of soundmaps is that they rarely contain recordings from private and personal domestic settings (2011). She suggests that this evident emphasis on the public, as opposed to the private, is augmented by the "impersonal" quality of most of the recordings, with recordists tending to annihilate or limit their audible presence. She goes on to find that most recordings contributing to soundmaps are made outside, rather than inside domestic spaces; are uploaded without commentary; and the acoustic properties of the sound are only valued as impersonal data. In excluding the individual, private and domestic from the soundmaps, and in listening to sound outside of social and cultural realms, we exclude some of the most fundamental facets of listening, such as gender. This has developed a pattern of "otherness," which in the short history of soundmaps, is affirmed within a context of the absence of a sonic representation of the domestic and of the personal. Waldock finds that the sounds contributed to various soundmaps lack a description of their meaning to the recordist; they are tagged "as observations of something else;" and this, for Waldock, "creates a tension between the personal and the other," as the act of recording, as well as the choice of who is recording what, when, and where, cannot be separated from the personal (2011). DeNora, in examining the effects that music can have on listeners from a holistic and embodied standpoint, asserts that "musical and sonic media enable individuals and collectives to redraw the boundaries between public and private spheres" (2013, p.63) and that they can change the locations available for this experience. Music, and more generally sound, has always been used to inflect space; yet, this presents contemporary space as a fractured and potentially alienated experience, whose material aspects need to be reconfigured to render them tractable (Nelson, 2015).

5.6 | Sonic memory matter

The themes of preservation, sonic memory, cultural heritage, identity, and belonging to a place are the common threads that connect a variety of soundmapping projects: "Memory has long been intimately related to topography and place" (Butler, 2006,

p.894). Listening, even if a place exists through our memories or imaginations, can still be vitally important in negotiating our being in the world. Some of the experimental approaches to soundmaps discussed above, are the least conventional in terms of cartographic character; they operate detached from a grid, relying on memory, storytelling, listening and found objects. Memory is affective in the sense that “it moves listeners towards the action of perception and there it becomes realised” (Voegelin, 2006). When we listen, we actively draw from thoughts, associations, and emotions, all of which shape our individual relationships with different sounds. These are different aspects of memory, which sound like many other senses, can induce. Memory motivates the listening and triggers an affective response essential for the perception of place. In this sense it cannot be passed off as trivial to soundmapping. Without this engagement we do not experience but only “read” the map. In this theorisation, affective reading is a force that moves bodies and, depending on the bodies involved, “what begins as a flow of raw vibration may produce sensations, emotions or moods, or affective cartographies that evoke memories, associations or senses of space, formal meanings and representations, as in spoken language” (Gallagher, 2016, p.44). This sonic-affective analysis proposed by Gallagher, adopts the notion of sound as affect and acknowledges that its vibratory force “may accumulate layers of significance over time, through repetition and habit, by becoming attached to other affects” (ibid).

Voegelin defines “sonic memory material” as “sounds plundered from radio broadcasts, records, feature films, the television, etc.” used in ways that produce a sense of synchronicity for audiences, instead of a just a nostalgic experience in the sense of a recognition of the past (2006). The purpose of using “sonic memory material” as a strategy of production, is to “trigger” a sensorial engagement with the sonic material of the soundmap. Such a sensorial engagement focuses and organises the listeners’ perception and involves them in the production of meaning, by reformulating a set of listening practices that belong to memory. Gallagher, drawing on the non-representational turn of theory in geography, makes a distinction between affect and meaning (2016), in which it should not be wholly excluded from the analysis of affect; rather attention needs to be paid to the push and pull between affect

and meaning, examining how affects are represented and how representations produce affects (Anderson, 2014; Gallagher, 2015).

Seen in this light, another methodological advantage of a soundmap is its ability to portray “the diversity of levels of abstraction for sound representations in human memory” (Tschirhart, 2013, pp.8-9). Sound is traditionally more associated with subjectivity than accuracy. However, this perception has shifted slightly in more recent years. In an interview with Angus Carlyle, environmental artist and writer Andrea Polli discusses how she believes “there is [...] a strong memory component with sound, that sound can be associated with remembering and with clarity; and that this combination is a powerful one” (Lane & Carlyle, 2013, p.23). From this perspective, geolocated sound has contributed to the sound-memory-clarity relationship that Polli describes, by combining the imaginative powers of memory, artistic expression and cartography (Anderson, 2015). The play between memory, place and voice has energized Cardiff’s famous soundwalks, inspiring the ever-growing number of sound walkers drifting around places in psychogeographic fashion.¹²⁸ It should be noted though, that all soundwalks can be highly differentiated in their philosophical and art-historical understandings of both psychogeography and sounding art work. Cardiff’s seminal work with sound and place, includes not just soundwalks, but also audiovisual walks and sound installations (in collaboration with George Bures Miller). In this she has been highly significant in sound studies and also in contemporary art, for the way she works both conceptually and phenomenologically with sound, emotion, memory, and place—particularly through voice (Kim-Cohen, 2009, pp.222-224). Cardiff’s use of voice brings place to life by animating it and disturbing it with her strange and disjointed narratives, while the entanglement of fact and fiction, dream and reality, intimacy and immediacy, could be

¹²⁸ Psychogeographic mapping charts place through the intensities of the emotion and affect, which attach us to and moves us through a particular place.

said to promote a sense of immersion in a hybrid space to the listener; one that is between locatedness and dislocatedness (Neumark, 2017, p.387).¹²⁹

Deleuze and Guattari distinguish two types of memory; short-term memory which is rhizomatic, because it has not yet been sorted, classified and stored, and long-term memory, which is arborescent and centralized, fixed and self-evident (Bonta & Protevi, 2004).¹³⁰ Concepts such as family, race, society, civilisation thrive in long-term memory (Deleuze & Guattari, 1987, p.16). Map-making then establishes the contours of such intensive processes. The various soundmapping projects that cartographically map and preserve sounds of a location as a sort of aural archive, can be said to belong to long-term memory. Such maps are also promoting a set of listening practices that (re)formulated for the purposes of making audible a sense of sonic, national or local, history, and for preserving it. Anderson, in his account on the origins of nationalism, recounts how European colonial powers devised the concept of “historical maps” that would provide a historical depth, “a sort of political-biographical narrative,” to reconstruct “the property-history of their new possessions” (2016, pp.174–175). In this context memories can possess a (re)territorialization function (Deleuze & Guattari, 1987, p.342). There is always a political ideology behind creating a soundmap when it is deployed as a tool to express the “rhizomatic” sonic identity of a place or a community. Soundmap projects that involve public engagement programmes bring the sonic memory material to local communities. The aim is to refocus on the use of sound media in local terms and produce sound matter that belongs to short-term memory. For this, a bottom-up approach can be used to build layers of personal attachment to the soundmap; this can in turn provide a viable and clear way to amalgamate the vast diversity of

¹²⁹ This can be said to be the case in all soundwalks and audio walks that use edited versions of the field recordings and soundscape compositions to create another possible representation of the space of the work for the listener. This is more extensively discussed in Chapter 3.

¹³⁰ In Deleuze and Guattari’s work “rhizome” is a philosophical concept, derived from the botanical term, suggesting that all things in the world are rhizomes, or rhizomatically interconnected, although such connections are not immediately visible. The “rhizome” is meant to evoke the hidden network quality of interlinked forces. As a model for culture, the rhizome is “ceaselessly established connections between semiotic chains, organizations of power, and circumstances relative to the arts, sciences, and social struggles” (Deleuze & Guattari, 1987, p.7).

intersectional identities; and promote a politics of identities instead of identity politics.

The focus lies on creating shared experiences, in memory, affect, and meaning making. The typology of such mapping places it within emotional geography, which is inclusive of the beings that inhabit space and of the forms of their passage through spaces, including the spaces of life.¹³¹ As such, a “tender” soundmap thus aims to place human beings at the very centre of the theoretical discourse, reclaiming intimacy as a space for interpretation. Here, expanding on the idea of the tender map, (as filtered through memory and brought to the fore by attention to affect, place, psychogeography and posthumanism), is the concept of the “enchanted map.” That is a hybrid, posthumanist or new materialist, map for wondering at the possibilities, (across species and things) of representing voice “in its human, animal, and machinic utterings and mutterings and matterings” (Neumark, 2016, p.383).¹³² By interrelating emotional and psychogeographic mapping, enchanted soundmaps are emotional and particular, located and imaginative, and have the potential to chart place through the intensities of the emotion and affect. At the same time, they can be understood as alternative modes of (dis)orientation through memory, association and sound. An enchanted mapping offers a way of understanding how voice attaches us to each other and to other creatures and things in the world—aesthetically, affectively, and ethically. The enchanted soundmap is inspired by new materialism in the sense that it de-privileges human agency, focusing instead on how assemblages of the animate and inanimate together produce the sonic environment.

Cartography is too often the tool of the few and the powerful. Mapping is about representations of our lived and perceived realities; yet, our realities include smell, touch, taste, imagining, and remembering. Here we are reminded of the earlier reference to Revill (2015), who discussed sound’s multiplicity, while pointing to its

¹³¹ Emotional cartography allows us to measure and represent the component of intimacy that is strictly connected to the experience of daily life (Bruno, 2002).

¹³² Posthumanism proposes the philosophical critique of the Western Humanist ideal of “Man” as the allegedly universal measure of all things. Posthumanists reject the human category as an old-fashioned, elitist and narrow phenomenon and, in its place, aim to open up new forms of subjectivity, relationality and sociality.

interplay between the phenomenology of listening, physical vibration in materials and making of meanings, with all three needing to be simultaneously considered. Now, in the following chapter I will consider the possibilities afforded by sound(ing) arts, in provoking the creation of acoustic communities, based on creative collaboration and distributed agency – aimed at showing how political ecologies of sound shape our experiences of everyday life and acoustic space.

Chapter 6 | Acoustic Communities in Acoustic Spaces

6.1 | Introduction

This chapter intends to sketch out some of the spheres in which sound art takes place; I call them acoustic city spaces that are made in sound. The chapter adopts a critical approach to sound(ing) art in order to highlight its “ethico-onto-epistemological” and political potentialities by integrating the aesthetic and phenomenological perspectives that have often dominated reflection in this field. Sound is invasive; it diffuses into space and saturates it; and it is because of its relational nature that it engages each body it encounters in a vibratory process (Biserna, 2017). According to O’ Callaghan (2009), sound is neither an object nor an attribute of an object, but it is generated by relationships and interactions between contexts, objects and subjects. This intrinsic relationality is linked to the material, vibratory nature of sound; to its capacity to generate energy and tactile exchanges, to generate radical permeability, to cross spaces by transmitting from one body to another, from one subject to another. As Roberto Barbanti points out, “the vibratory-acoustic event, the context in which it takes place and the subject who perceives are a unit and they “compose” the perceived sound in its irreducible duration” (Barbanti, 2004, p.95, quoted in Biserna, 2017). The auditory sphere is thus dominated by laws that are profoundly different from those of the visible; laws that contradict and reverse dichotomies deeply rooted in Western thought, such as the distinction between “subject and object, inside and outside, self and world” (Bull, 2005a, p.112).

In this chapter I turn my attention to acoustic communities that are forged in listening to sound(ing) art; also, to (urban) sound as a material that produces situated knowledge, but also conflicts to be controlled, as a medium communicating knowledge of the city, and of conferring the co-habitation of human and non-human ecosystems. Such sonic urbanism is informed by the practices, concepts, politics, and aesthetics of making organised sound, not just as a cultural phenomenon taking place in the city, but as a set of ways of thinking and ways of doing, i.e. in participating in acoustic communities that operate in the realm of the audible. The themes that this chapter addresses, draw from theories of listening and phenomenological perceptions of sound and space that have been discussed in previous chapters to

address the following two questions: a) in what ways sound(ing) art practices enable the emergence of acoustic communities in different cultural contexts and locations?, and b) how does sonic design shape our experiences of everyday life to create acoustic spaces of encounter between individuals? Focusing on sound art as a tool and tactic for collective and distributed action and as a way of co-production of situated spatial knowledge will contribute to the dialogue on the role of human and non-human actors in creating a non-musicalized, temporal, spatial and embodied aesthetic experience of the acoustic urban environment.¹³³

6.2 | Acoustic communities

Throughout the course of this research, I actively sought to explore the possibilities for social connections to transpire; ones that engendered the emergence of an acoustic micro-community, ephemeral by nature and yet powerful in/albeit its transience. I find it useful here to apply Truax's concept of "acoustic communication" (1984), developed using a communicational approach to sound and noise, in my own discussion of how acoustic communities form in these third spaces, wherein sound, walking, and listening play a formative role. In this, the characteristics of the acoustic community's soundscape, as Truax asserted are: a range of different sounds that carry "rich" acoustic information; these sounds are themselves complex, and the types of information they transmit enable members of the community to decode and interpret them; and the result is a functional balance within the community defined by the spatial, temporal, social, and cultural constraints of the environment (p.71). The acoustic community may be defined then as:

"any soundscape in which acoustic information plays a pervasive role in the lives of the inhabitants [...] any system within which acoustic information is exchanged ... Such a system is "information rich" in terms of sound, and therefore sound plays a significant role in defining the community spatially, temporally [...], as well as socially and culturally in terms of shared activities, rituals and dominant institutions" (Truax, 1984, p.58).

Acoustic communities are shaped and confined in sound: "the boundary of the community is arbitrary and may be as small as a room of people, a home or building, or as large as an urban community, a broadcast area, or any other system of

¹³³ These actors can be artists, researchers, public, as well as technologies, sounds, and atmospheres.

electroacoustic communication. In short, it is any system within which acoustic information is exchanged" (Truax, 1984, p.66). In the definition that Truax proposes, I would like to highlight that what he says about the boundaries of communities being arbitrary, together with the flexibility he implies in terms of scale, structure, shape of embodied experience and/or terms of membership (range of shared interests), strongly suggests that communities can form in a variety of ways and along non-traditional lines. From my perspective, this gives legitimacy to the idea of acoustic community formation, with boundaries being quite fluid and small, and the duration of the affective bonds formed, being limited. Indeed, Truax's theory on the acoustic community, resonates with my claim that community formation emerged from the exchange of music-sonic, emplaced and embodied urban experience and technical knowledge. I would thus assert that extensive conversations, the mutual transfer of opinions and ideas, and the sharing of knowledge, methods, tools and technologies, leads to an enhancement of the acoustic awareness. This enables acoustic communities to produce their own interpretations of their sonic environment; highlighting alternative modes of understanding of their social condition and their relation to the natural and urban environment.

Where my own perspective differs from Truax, is in his identification of noise as "the chief enemy of the acoustic community" (1984, p.58), which alludes to a negative definition of the community in relation to noise. This adverse connotation that he applies to noise, is most likely informed by the time and context in which he was writing, which is why I incorporated a different perspective on the productive potential of noise in urban spaces in the previous chapter. This alternative, and I would argue more contemporary, viewpoint, draws connections to noise's community forming potential in the context of the designed space, whether it is real, virtual, or hybrid. In contrast, Truax repeatedly refers to intrusive sounds (noise) as a hindrance to the acoustic definition of the community and as presenting a threat to its overall coherence. And while he does make an honest effort to address the element of noise in a subjective manner - dealing with its role in a process, rather than any kind of fixed objective definition - his approach limits its effects to negative associations; seeing noise as purely disruptive and obscuring the clarity of the acoustic environment.

In my research, I have thus chosen to adopt a subjective definition of noise as “beyond unwanted sound” (Thompson, 2017a, p.3) and to uncover the moments when noise actually enabled clarity, connection and even strengthened the acoustic community. Here, Marie Thompson argues that Schafer’s environmentalist praxis of acoustic ecology is typical of aesthetic moralism; silencing other possibilities and potentialities of auditory experience. She contends that Acoustic Ecology’s notion of the soundscape is not so much based upon an in-depth empirical analysis of the social, psychological and physiological effects of the rising levels of environmental sound; it is rather based on an overarching, ideological and moral division between a pure, positive and natural silence and an impure, negative and unnatural noise. Where Acoustic Ecology has frequently framed noise as the “enemy” (Truax, 1984) of the community and a threat to the ‘natural’ soundscape, the experience of the soundwalk made apparent the necessity and affectivity of noise. The presence of the noisy milieu/medium is not minimized; instead, signal and noise, foreground and background, event and context, are presented together, alluding to the notion that what is heard stems from the combination of sound source and its environment. I therefore would like to propose the idea of noise as shaping acoustic communities; using it as a way of bringing renewed attention to the importance of noise in shaping people’s social positioning towards one another and towards the experience of space itself. This I would argue allows us to extrapolate the observed and experienced effects of noise on the sociality of experiencing bodies within space and to thus imagine what potential that playful and performative strategies might have for the urban design of our cities in general, public spaces in particular.

The participation in what we might think of as a creative and performative mapping practice, facilitated engagement with both the content and materials as well as sparking connections with others who occupied the same space at the same time. In this way, the sound walk/map practice described in Chapter 4, represented us as part of a constant material inscription on, and with, our own bodies and those of others (Nicklin, 2017). Here it is interesting to note that while the context is different, the role of the locative media in the soundwalk context is similar to the way in which other digital platforms, such as social media or augmented reality games, enable and encourage playful interactions between members of the emergent acoustic micro-

community, as well as engagement with the concept of place itself. Such re-enactment of sense of place through one's sensory perception, echoes Doreen Massey's concerns about how we will be able to experience and understand place, particularly in light of the anxieties and uncertainties we face in an era of global media erosion (1994) and how a sense of place can result from the growing ubiquity of new media. Importantly, participation in sound(ing) art practices where acoustic communities originate, is not confined to new and mobile media; rather emerging within performative contexts, where the body in motion is the trigger for the experience itself. At the same time, this is a community organized through its members' processes of participation, who are considered equals in what Stavrides describes as a "community in movement" (2013); sharing beliefs and habits and developing forms of active participation.

Communities in movement are formed by bodies in motion; what Brian Massumi calls the "continuous body" (2002, p.21).¹³⁴ The body becomes the key to unlocking the entire experience of the soundwalk, due to the use of, and interaction with, location-based technology through the senses. For example, as described previously in Chapter 4, *Impossible Inaudible Soundwalk* percipients' movement through space triggered the playing of different audio tracks; so as soon as one crossed the sonic border of each composition circle, the new sound began. Thus, as the physical body moved, the acoustic environment reacted to this, provoking people to stop, keep moving, explore the dimensions of the space, and play with the order in which they proceed - linear versus intermittent. In this way, percipients became part of an acoustic community of sorts, one that is fluid and in movement, orchestrated by the sound design and location-based technology. The individuals moved in and out of different formations and clusters of people; re-enacting their sense of place, by participating in a sonic and embodied mapping practice and by tracing their actions in the world. This collective tracing of peoples' actions within the soundwalk space, mediated by sound and noise, resulted in a dynamic embodiment of relations that enabled an acoustic micro-community to emerge.

¹³⁴ For Massumi only "an insensible body is a truly continuous body," which encases the ultimate paradox of the dynamic unity of movement and sensation (2002, p.21).

Ultimately, the intellectual practices of these communities affirm the necessity of shared participation and distributed agency. Here, Coyne in deliberating philosophical hermeneutics theory, discusses “interpretative communities as agents of creation” (2009). He develops the concept of distributed agency as one supporting the prior existence of structures within human environments, in various ways that uphold certain outcomes. These structures consist of objects that are engrossed in networks of interconnections, persisting as traces through the environment, rendering the human perception of spaces as culturally loaded, because of the interplay between what role a space was intended to fulfil and the personal interpretive framework through which it is experienced. Informed by actor-network theory and the theme of agential multiplicity devised by Bruno Latour, Coyne understands cognition as “distributed, social, and “out there” in the environment” (p.130). This, for Coyne, professes that agency, authorship and creation are likewise shared and exist out there, making place “both a source and a medium of agency” (ibid). In this sense, the physicality of place partakes in the spatial action of cognition, associating the concept of collective agency with situated cognition that happens while moving about the soundwalk space. But it is not just the space that one experiences and gets to know and interpret; it is a space collectively created through bodies and their stories.

Sound’s affective capacity, it can be argued, thus results in embodied interaction, embodiment relations, and co-presence.¹³⁵ According to Gallagher (2013), here sonic affect constructs a “base layer” of sound, which we don’t necessarily need to perceive, feel, or attribute meaning to, for it to be inherently impactful. Indeed, because of its energetic fluctuation, this base layer can “activate other registers as it encounters bodies, sparking nervous and motor systems, accruing or entraining additional layers of sense and signification” (Gallagher, 2016, p.44). The empathy enabled by proximity extended beyond the immersion felt within the hybrid space of the soundwalk, and towards fellow percipients. For instance, in returning to the importance of double experience and double consciousness established by the sonic performativity in the

¹³⁵ Affect is a recurring theme in the work of Deleuze and Guattari, having a central role in their “ontology of forces.” See Gilles Deleuze and Félix Guattari, *What is Philosophy?* and Graham Burchell and Hugh Tomlinson, Verso, London (in particular pp. 163–200). For Massumi’s use of affect see Brian Massumi, *Parables for the Virtual*, Duke University Press, Durham, 2002.

soundwalk, I want to highlight the productive nature of this self-reflective state of being; especially because it gave the individual the opportunity to reflect on their one individual experience, but with a constant awareness of others within the space. In this, the sounds' efficacy served to structure the movement within the soundwalk space, since it simultaneously encouraged listeners to dwell in a particular section with other people and to keep moving – either to find a space where they can experience the sound for themselves and/or to discover what part of acoustic map of the territory they could visit next; because it was with the sound that the space itself became animated and engaging.

This affective sonic experience becomes important to consider, as it transforms peoples' awareness and movement through space and orientation towards each other, with potential to build an acoustic community. For Thompson, affect has the capacity to transform, restructure and facilitate alternative modes of being; but as “a central mechanism of social reproduction” it should not be ‘simply taken, politically speaking, as a way out” (2017a, p.10). This re-enactment of space and positioning towards the other, plays an important role in the experience, and represents one way of understanding how experiencing place through sound can engender social interaction among those sharing the same space. Social actors in this context grasp for a shared understanding of their lifeworld; and this then opens the door to discussing connections between the experiences of mobile sound art in public space and how sounds and noise within sound(ing) art works might further enhance and amplify the likelihood of acoustic communities to form.

By participating in or contributing to soundwalks and soundmaps, listeners become part of a process that allows them to interact with other people and to form acoustic communities, which in fact are a variety of intersecting micro-communities. Thus, an acoustic space emerges, consisting of many different and intersecting acoustic micro-communities in which contradictions and uneven development proliferate, but also within which possibilities for creativity arise. This interaction is not dictated by individualistic terms; so in many ways, members of these acoustic communities feel like they can belong somewhere where there is no hierarchy to enforce specific roles.

Instead, through horizontal and equal procedures, they co-exist in a novel way and at the same time envisage a new world; a new “Lebenswelt.”¹³⁶

Such analysis of course is based on the phenomenological acceptance of the social coexistence as “intersubjective life-worlds.” Indeed, what is characteristic of the life-world for Habermas, is exactly this dialogic intersubjectivity, wherein political subjects can emerge as collective subjects who should not be modified to conform to the existing social order.¹³⁷ Similarly, Hardt and Negri describe this novel space of coexistence as the “multitude [...] of potential subjectivities; a set of ‘singularities’ which are inherently multiple and are connected through multiple forms of coexistence” (Hardt & Negri, 2009, quoted in Stavrides, 2016, p.37). This ties into the way community is defined in this thesis; in relation to performative forms of sharing and encounter while experiencing public space through sound(ing) art. Percipients’ modes of subjectivity in this sense are equally discursive and emotional, reasoned and felt, driven by individual passion and the collective intelligence of the acoustic community. In this, sounds contribute to the emerging features of subjectivity, what Didier Anzieu terms the “sonorous envelope,” the sonorous wrapping from which we

¹³⁶ Husserl develops the term “life-world” (Lebenswelt) to juxtapose it to the scientific world and in this way to stress the opposition between the subjectivity inherent to the one to the objectivity inherent to the other. For Schütz, the term life-world within the social reality, places the emphasis on the importance of everyday life for analysis (Wagner, 1983); the world according to Schütz is first and foremost an intersubjective cultural world within which everything that happens can be interpreted through connections and figures of meanings, thus enabling everyday action and experience. Habermas with his double capacity as philosopher and sociologist, and indeed of critical theory, develops further Schütz’s thesis of the intersubjective cultural world, by emphasizing the ways in which people communicate on the basis of common significations and meanings. Nevertheless, the lifeworld is not easy to define; it is the world as we live in and experience it - the unquestioned, practical, historically conditioned, pre-theoretical, and familiar world of people’s everyday lives. The lifeworld is a medium of “symbolic space,” within which culture, social integration and personality are sustained and reproduced. The lifeworld cannot be “known,” since it serves as the vehicle of all knowing. We cannot step outside of our lifeworld any more than we can our language. Thus, the lifeworld can be reproduced through communicative action, but not through instrumental or strategic action. In the philosophical theory of communicative action (Habermas), rationality refers to interpersonal communication rather than to a knowing subject; therefore, a social view of rationality is suggested. The theory differentiates between two kinds of rationality, the emancipative communicative and the strategic or instrumental reasoning (Schaefer et al., 2013).

¹³⁷ Habermas introduces the term “public sphere” and by using a historic approach he argues that public sphere emerged in Europe in the 18th century as a space for critical conversation, open to everyone, where individuals-citizens constituted a public whose “public sense” would act as a means for control of the state’s power. With this politically critical thought, Habermas understands the life-world as the way in which its participants reach a consensus through communication, by becoming speakers and listeners at the same time.

draw our experience of being a body in the world (Anzieu, 1976 quoted in LaBelle, 2018, p.128). This sonic way of producing bodies and selves is “sensitive to primary flows and forcefulness of sonority as a link to the animations around us” (ibid); resonating strongly with percipients’ experience as part of this thesis’ research.

Indeed, as I have argued in previous chapters, there is an emergent global network of listeners who are interested in engaging with sounds of the (urban) environment, public space, human terrains and the more-than-human biospheres. They are what I refer to as acoustic communities; and the identity of these acoustic communities is not defined by geographical places, as we don’t necessarily associate these communities with place. In fact, today with the advancement of new Information and Communication Technologies (ICTs), communities form without belonging to the same (geographical) place. And even when they exist in a common territory, members of the same community can develop different senses of place. As such, the experience of place is not automatically linked to a physical location, but to a situation, what Timeto describes as “a more complex but less binding from of positionality” (2015, p.86). Therefore, as stated earlier, I suggest in this thesis that there is not an essential acoustic community existing as a whole, but that it consists of many micro-communities, which can be ephemeral or transient. To this end, in the previous chapter, I showed that each micro-community independently works towards achieving a common goal from the bottom-up. Indeed, here, the variety and vast plethora of sound(ing) art works resulting from the so-called sonic turn, afford acoustic community members in search of meaningful and personalized engagement with sound and their sonic environment, the opportunity to coalesce. This has resulted in them now slowly moving toward forming smaller, more intimate and engaged micro-communities and networks, which enable them to perform their multiple and intersecting urban identities.

According to Sennett, “urban identities are exhibited in spaces where a common feeling of belonging dominates every experience of being in public” (Sennett, 1993, quoted in Stavrides, 2016, p.70). Acoustic communities are defined by their situatedness and their capacity for choice; and they are not constituted by pre-prescribed consensus, but by the practices through which they co-create their acoustic space i.e. by communication. It is through communicative practices that

members of the acoustic community understand their interests and their identities in ways that inform their decisions about what to do. Here, in her essay about the importance of listening in contemporary democratic theory, Bickford invokes Young's conception of a "group-differentiated participatory public" (Young, 1990, quoted in Bickford, 1996, p.105) that takes place in the public realm, to connect group identities through their differences rather than commonality. In addition, Bickford uses Anzaldua's metaphor of "making face" to rethink connections between identities and politics. Anzaldua, via Bickford, contends that we are embedded in our social existence, while having the capacity to present ourselves as self-conscious, in ways that engage but do not simply reflect our differences (Bickford, 1996, pp.20–21).

Such differences are not to be regarded as inherent in nature but recognized as a product of social relations; and a micro-community then arises only "in the encounter and interaction between social collectivities that experience some differences in their way of life and forms of associations" (Young, 1990, p.43). Young (1990) identifies two means by which we recognize and define social groups: first the "cultural forms, practices, or way of life" that distinguishes them from another group; and secondly, the 'affinity' members have for one another, their 'sense of identity' with and within the group. She stresses this sense of affinity as constitutive of group identity, rejecting the notion that there is a "common nature" present among members of the same group, or those with inherently shared interests. Although social groups usually share some interests, it is not the interests that make it a group; it is the shared set of practices and the affinity that sharing creates. Group membership importantly is a matter of consciousness.

To ensure that diverse needs and interests are met, and diverse perspectives included, Young argues that we need to institutionalize mechanisms for listening to voices, which might otherwise be obscured. She proposes group representation as such a mechanism.¹³⁸ In this, Young's articulation of "the politics of difference" and

¹³⁸ Group representation includes "self-organization of group members," "group analysis and group generation of policy proposals," and "group veto power regarding specific policies that affect a group directly" (Young, 1990, p.185).

her concept of group representation, provides an inventive and intriguing attempt to combine citizenship and group identity. Yet, Bickford argues (1996), Young ignores that such social groups exist in the common world as multiple members of the public, and that the way they are perceived does not necessarily coincide with their own sense of membership or affinity. Young's approach to the relationship between social group identity and politics, assumes that having a particular identity (being part of a particular group) leads automatically to a particular stance, interest, or opinion.

In contrast, critical examination of sound artworks that offer exciting possibilities for active engagement with crucial issues of citizenship (Bird, 2011), can cast light on emerging themes such as creativity, participation, and the changing roles of audiences as social actors and facilitators of content and meaning. The shared interest in sound art or the acoustic environment that sound art audiences share, is not enough to ascribe them with the acoustic community identity. The co-present musical and sonic members of the public that are animated by the socio-spatialities of the sound art performance, represent artistic acoustic communities in the making, "credited with powers either to reaffirm existing boundaries of political affiliation or social identity formation, or to initiate or catalyse their reconfiguration" (Born, 2013, p.38). LaBelle (2018) describes these communities as "unlikely publics" which through a range of civic gestures and creative practices, intensify the social and political imagination and enable a broader engagement with everyday life. These creative and collaborative practices resist individual identities without overwriting them; gaining traction alternatively, through the thickness of relations that give expression to life in the making.

Born (2013, pp.37-38) identifies three types of such publics: The first type is forged through participation or through engaging with the spatial qualities of the (performance) space, into a larger, non-musical political transformation. This is an agential, solidary and politicised public (ibid). The second type is characterised by intimacy or collective withdrawal from the world. Such publics form sonic partnerships that cause an integration or transformation of their participants' social identities (ibid). The last category of musical publics are the ephemeral groups constituted by a synchronous presence in the performance space. This kind of participation does not favour the production of alliances, due to the transient nature

of the experience (ibid). In this though, I would like to argue that even though sound art audiences constitute the type of minimalist public that Born describes as a “fragmentary group [...] traversed by resilient social differences or by the individuation favoured by auditory self-enclosure in headphones” (2013, p.38), the socio-spatialities of the sound art performance engage those involved in a kind of experience that allows the political affiliation or social identity formation potential of the first and second type of publics to emerge and evolve.

Of course, and as Born posits as well, such transformation cannot be assured, because there is not one global acoustic community, rather networks of listeners and micro-communities that produce a localized aural knowledge. Such communities may lend themselves to small-scale projects, which involve micro-publics engaged in the collection and dissemination of soundscapes through integrity-driven processes. Acoustic communities explore their sound environment and share their understanding of it. They record, control, and produce a critical commentary on their own soundscapes. Through listening, walking, soundmapping, field recording and participating in sound(ing) art works, they produce a type of knowledge that is localized, embodied and socially embedded. Such an activist position of course requires a community organized through processes of participation by its members; considered equals, with a desire to act and to respond to/against/with other community members. Such acoustic communities are produced via a dialogic editing of their soundscape, engaging with it and learning from it, and from each other, through collaborative, playful and performative interactions.

The multiplicity of affinities afforded by such actions, is the basis for articulating an alternative understanding of identity, which proposes the notion of a heterogeneous participatory public for sound(ing) art. Here, the activities presented in previous chapters, I would argue are examples how acoustic communities are engaging with the co-operative creative actions of listening, which focus on their experience of place through sound and mobility; specifically, through sound walking/mapping. I have also shown how these communities are formed through creativity and distributed agency and are viewed as interpretative communities (Coyne, 2009). Such interpretative acoustic communities are considered as agents of creation; and listening in that sense declares the necessity of shared participation and distributed agency (p.128) –

becoming active and creative. Moving beyond the plural self, the creative agent requires courage to be open to possibilities of contradiction and conflict within oneself, without making social identities irrelevant. Identity then is a matter of active creation. It is a question of agency that happens through action entwined with embodiedness and embeddedness with one's physical and social self; not simply as a constraint or necessary condition, but as the material with which we create. This understanding then gives rise to the possibility of a public identity, actively created by being present in public.

Seen in this light, members of the acoustic community who experience public spaces through listening, contextualize the production of knowledge. Sound, in this sense, operates as "a mechanism for a distributed agency" (LaBelle, 2016, p.276), that affords new associations for acoustic communities to establish "a space of radical sharing" (ibid). This shared knowledge, with its diverse modes of publicness, enables acoustic communities to reclaim city spaces; and similar claims can be made about other communities, such as minorities, interest groups, hobbyists, train spotters, and so on. People construct and reproduce space-bound identities through representations connected to struggles, which mold reality both in terms of material interventions and of battles over the sounding and meaning of inhabited spaces. What is particularly distinctive about sound(ing) arts in public urban spaces, is that they promote the latter's creative reinvention; seeing spaces as collectively produced and shared among their citizens, who come together in real, hybrid, or virtual space and form artistic acoustic communities. The sound walks/maps that have been the theme of this thesis do not solely support practices of information and knowledge exchange: they "mark" the city through the information exchange they make possible, "re-inscribing" the city's body, connecting places and creating shared points of reference for specific emerging communities that recognize them (Stavrides, 2016).

According to LaBelle (2018) the reterritorializing of politics can happen through the processes of re-inscription and relocation, and via the active mediation of de-territorializing artistic interventions. Acoustic communities become emplaced in urban space and develop by delimiting and re-appropriating their habitats. Indeed, the concept of acoustic community can be further deployed as a way of expanding traditional understandings of space and location, as more-than-spatial terms. My

understanding of acoustic space is defined, moulded, and created by social actors in their contesting gestures to capture a meaningful presence: “[a]coustic space becomes socially meaningful in the process of being performed” (Massey, 2005, p.189). In the following section therefore, I examine different theories of spatial production in order to arrive at and establish an agonistic intervention for sound(ing) art, which is “radically open to additional othernesses” (Soja, 1996, p.61).

6.3 | Making space in sound: thinking about space with a sonic sensibility

The contribution of the American urban planner Kevin Lynch (1960), postulating that cities cannot be understood in terms of their buildings, infrastructures, and physical geography alone, was considered controversial in the 1960s. As part of his theoretical study *The Image of the City* (Lynch, 1960), he examined urbanism from the perspective of the citizens, understanding them as an important source of information about urban planning. He analysed citizens’ movements and behaviours in public space, studying the ways in which the city affects the emotions and behaviours of its citizens. Here, I follow this train of thought, to form the idea of an acoustic urban space that is co-produced by its citizens; starting from the premise of understanding spatial production as processual (Massey, 2005). In this, public space can be considered as an assemblage that consists of a wide range of heterogeneous components¹³⁹ and that these components can be human and non-human, material and immaterial; contributing to the assemblage with their specific set of relations and their own agency. Sound, as an integral element of the assemblage we call public space, can be understood as retaining its own agency; with sound(ing) art practices highlighting the complex and heterogenous set of relations that constitute the assemblage, while at the same time modifying them through their artistic practice.

The urban fabric of the city, as well as the everyday lived experiences within it - what has been described as the “urban materiality” - is inextricably linked with city sounds that occupy places, locations, social groups, and bodies. Urban spaces are influenced

¹³⁹ This notion of public space is informed by Deleuze and Guattari’s (1987) take on the Spinozist notion of the “body,” developed as “ontology of assemblage.”

by the sounds that inhabit them, and urban form shapes these sounds in turn, reflecting and influencing the city's multitude of identities, politics, and cultures. Perhaps the first scholars to use the term "acoustic space," which initiated academic consideration of the sonic processes of making space, were Marshall McLuhan and Edmund Carpenter in the late 1950s (Schafer, 2007, p.83).¹⁴⁰ Here, the acoustic space in terms of a sound art work, is shaped by the acoustic effects of the environment on sound, especially sound reflection, diffraction and resonance. These are, according to Macedo (2015), essential elements of its musical structure, and are manipulated by the composer or the sound artist to produce certain spatial perceptions for the listeners. Hence, I would like to argue that processes and practices that make acoustic spaces, are products of socio-material relationalities, in addition to visual and Cartesian spaces and spatialities. LaBelle notes that sound's relational condition is indicated through spatial modes, as sound and space formulate a dynamic relationship. And as discussed in the introduction of this thesis, spatiality stands at the core of sound art practice, activating an existing relation between sound and space: "Sound thus performs with and through space: it navigates geographically, reverberates acoustically, and structures socially" (LaBelle, 2006, pp.xi-xii).

Sonic spatiality can be usually ascertained through conceptions of embodiment. These are experiences that include "perceptual awareness" based on reception of several sensory stimuli or listening practices, which involve "imaginative awareness" that stems from the listening that occurs within ones' own self-presence in the perceived world. According to Revill (2016), the way to distinguish the materiality of sound as more than an affective response to a reflective listening practice, is to conceive it as spatio-temporal event.¹⁴¹ In this consideration of sound, space is made and shaped by the qualities of sound itself. In spatial terms, listening to sounds enables the embodied perception of features of depth, distance and proximity, thus generating particular kinds of density, texture and form to the sonic space (Revill, 2016). Concurrently,

¹⁴⁰ According to Schafer, McLuhan conceived of the electric world as aural, moving us back into the acoustic space of preliterate culture. Schafer invites us to conceptualize acoustic space in the geometrical figure of the sphere (2007, p.84).

¹⁴¹ Every representation is a representation of a space-time (Massey 2005, p.27). Linking representations exclusively with space and not with time as well is as problematic as defining geography as merely a spatial discipline.

sounds' capacity to denote feelings of clarity, delicacy and intimacy, animates the contingency and vitality of sonic spatiality. Listening and perception collaborate with the physical qualities of sound to contour its sonic spatialities. This phenomenology of sound as event, is produced through both its material and affective processes.

In the *Production of Space*, Lefebvre (1991) attempts to consolidate the social dimension in the creation of space. To do so, he points out the importance of time for the lived experience, asserting that we need to consider the temporal actions that take place within our cities. These complex linkages between space, time, and social being are examined in Lefebvre's *Rhythmanalysis* of the social production of space (2004). Massey's work on space resonates with Lefebvre's approach, arguing that space has too often been treated as abstract and separated from time (Massey, 2005, p.24). Lefebvre (1991) charts the social production of space, and argues that despite capitalism's tendency toward abstract space, social space is inherently multiple, connected to lived practice and ultimately irreducible to abstract space (p.63). In this, he focuses on lived spaces and the everyday. Here, the everyday is synonymous with the physical experience felt by the biological body, while incorporating 'official' conceptions of space; reconciling thought and action. With active practice, the everyday can become a creative milieu in which living can be developed into an art, available to an anonymous collective.

This intersection of social space and time, is particularly evident in Foucault's notion of "other space" or what he called as "heterotopia" (1986). Heterotopias invigorate the relations among different sites, overcoming the place/space dualism. Space itself, as a hierarchic ensemble of places, is rooted in the history of Western experience, and its intersection with time cannot be disregarded. Foucault's heterotopoanalysis distinguishes between two main types of spaces: utopias, sites with no real place, which introduce society in a perfected form and are fundamentally unreal spaces, and heterotopias, real places that do exist and are formed in the very founding of a society. These are something like counter-sites; a kind of "effectively enacted utopia in which the real sites are simultaneously represented, contested, and inverted" (ibid). Places of this kind are different from all other sites that they reflect and speak about; existing

outside of them.¹⁴² Heterotopias are indeed the places where differences meet; they are simultaneously connected and separated from the places from which they differ. As sites of osmosis and encounter, heterotopias make collective experiences of otherness visible, diffusing new forms of urban collective life. Heterotopic moments can be described as thresholds in social time, as well as in social space, where communities can invent spaces of negotiation and spaces that mediate differing cultural traditions.

Space as a temporal formation is also instituted by the appearance and disappearance of sound (LaBelle, 2016, p.275). Sound's restless nature creates the opportunity for relating with the *other*, and therefore, holds extended opportunities for solidarity and integration, creating a space of radical sharing. Acoustic space is thus lived; not represented or conceived. This renewed awareness of space perplexes traditional ways of determining time. As such, sound(ing) artworks are addressing this ephemeral materiality of sound. By emphasizing its temporality, they can make citizens become more aware of their own ways of calculating the time they spend in their cities. But to give way to this particular sociality, sound needs to be simultaneously fixed as a vibrant matter, received or perceived by a listener, and identified as meaningful experience, "in order to be thought of as sound rather than pulse, signal or meaningless noise" (Revill, 2016, p.246). In this context sound cannot exist independently from its own spatial and temporal conditions, while it is also "shaped subjectively, depending on the auditory capacity, the attitude, and the psychology and culture of the listener" (Augoyard & Torgue, 2005, p.4).

Within this context, the relationships between sound and space are expressed as mediations, which uphold a role for sound in the production and reproduction of spatial assemblages (Revill, 2016, p.245). Accordingly, in thinking about sound in political terms, it is the sonic mediation that aspires to provide it with political agency. In his most recent study on sound as an emergent form of resistance, LaBelle positions

¹⁴² Between utopias and heterotopias there might be a sort of mixed, joint experience, which would be the mirror. The mirror is, after all, a utopia, since it is a placeless place. But it is also a heterotopia in so far as the mirror does exist in reality (Foucault, 1986). According to Massey, all spaces contain an element of heterotopia (2005, p.116) because all spaces are the product of undetermined but actualisable relations.

sound and its discourses in dialogue with contemporary struggles (2018). Sound's agentive potentiality, what LaBelle describes as "sonic agency," enables a sonic sensibility that can inform emancipatory practices, forming a critical base by which to approach questions of political struggle (p.2). According to Revill (2016), the relationality of sonic space, and its ontological making, is involved in the political agency of sound.¹⁴³ In this, acoustic spaces need to be understood as dynamic and interrelated entities. Rather than the notion of the soundscape as "a more or less objective space containing sounds," acoustic space, in contrast, "creates itself in time" (LaBelle, 2010, p.xxi) and "in the receptivity and understanding of the listening ear" (Revill, 2016, p.246). To this extent, sound has a distinctive place in negotiating relationships between self and world (p.251); and is understood as a medium and platform for constructing subjectivity, by vibrating in and amongst the world. This process enables new conceptualizations of the public sphere and of expressions of emancipatory practices, through listening and being heard, which, according to LaBelle (2018) are bridging the spiritual and the political.

Carpenter and McLuhan's assertion that sonic space is "a sphere without fixed boundaries", made by the sound itself rather than the space containing the sound (1960, quoted in LaBelle, 2010, p.xxii), supposes a "thing-ness" of sound, open to and perceived through sensorial engagement (Voegelin, 2010). For Voegelin, the "sonic thing-ness" is not a matter of perspective in relation to "other things, social functions or ordered in relation to a purpose. The sonic thing makes any purpose or social relations contingent and transitive" (Voegelin, 2010, p.19). Voegelin's notion of thing-ness does not engage with existing debates around the nature of sound however; her ontology of sound is always paired with the idea of listener as producer (2010, p.38). This approach though fails to include the diverse series of mediations that shape and inform the sonic; and as Kane argues, it is a "formless and immaterial" ontology of sound (2012). The embodiedness of listening is not necessarily commensurate with situatedness, and thus, the listener-producer is not always producing sonic knowledge in a - politically and ethically - accountable and responsible manner.

¹⁴³ Revill draws on the notion of political agency to probe the processual making of sonic space as socio-material relationality, informed by geographical studies of sensory experience and the politics of agentive materiality. See (Barad, 2007; Braun & Whatmore, 2010).

Hence, the concept of the 'natureculture of sound', may extend the notion of sound's thing-ness as concurrently produced by its making processes, by the materials which conduct and transmit it, and by its perceptual processes, without privileging either the body or its material vitality (Revill, 2016, p.252).

In some ways, sounds can reveal the 'sickness' or 'well-being' of society. The notion of sonic mediation converges the aesthetic with the moral and the political and addresses it in criticality. It is because of its multiple mediations that sound has the capacity to affect us as more than as a physical vibration, generating the conditions for its political agency to manifest. Sound co-produces "political effects in materials and entities" (Revill, 2016, p.253) by forcing a movement between bodies; animating both them and things. Shaped and moulded by a variety of agents, in any number of associations and assemblages, sound weaves bodies together (human and nonhuman, objects and things); bodies that are not always conjunctural. It thus acts as "a material hinge, bringing into contact contradictory and divergent forces, spaces, bodies, and things" (LaBelle, 2016, p.275). This form of sonic agency defines acoustic space as "one of animation and cohabitation" (p.276) paving the way for particular socialities to emerge. The spatio-temporal natureculture of sound, generates acoustic spaces that are "unfixed, vibrant, and coproduced" (ibid), suggesting a less concrete and more ephemeral spatiality. Through an interaction within the context of the city, sound(ing) art advances the concept of democratising urban space through re-appropriation, giving citizens the opportunity to form attentive and personal relationships with their everyday spaces. This can induce a more dynamic role for them in the city, as well as promote the co-creation of urban spaces that we can live and enjoy, instead of just crossing through.

Viewed from such a perspective, the theory of sonic mediation has been analysed by Georgina Born (2013), who conceives sonic mediation as a co-productive process, generative of social relations, while also mediating existing social formations. She has developed a framework of "four planes" of social mediation in relation to music, which she argues can be more widely applicable. The first two planes address the diverse socialities produced in listening practices and their social locations, such as musical ensembles, rehearsals, concerts, dance clubs, listening sessions, recording studios, social media practices; looking at the power they have to animate musically imagined

communities, virtual collectives, musical publics or affective alliances. The third and fourth planes focus on music's capacity to refract wider pre-existing social relations such as class, ethnicity, race, gender, sexuality, nationality, religion, locality and so on, in addition to the physicality of sound and the technologies associated with sound's storage, transmission and reproduction. This is because the former are entangled in the latter; in the organisational, institutional and political-economic forms that enable music's production, reproduction and transformation.

Migrating to a sound(ing) art discourse, these four levels of sonic mediation enter into dynamic sonic-social and spatial assemblages. The first level of social mediation of sound(ing) art practices is associated with the diverse socialities they produce, in the guise of the immediate socialities in the performance practice: in workshops, soundwalks, and soundmapping practices. In the second level, sound art has affective powers to animate acoustically imagined communities and affective alliances, which are devoted to soundscape preservation, design, and communication. In the third level, sound art deflects preceding social relations, confronting essentialist ideas of supposed neutrality of sound-in-itself. In the fourth level, sound(ing) art interweaves with the organisational and institutional forms that enable its production; apparent in an array of alternative organisational forms of production. In sum, all four levels of social mediation affirm that sound art has no essence but encapsulates a heterogeneous and distributed socio-spatial being. These levels of analysis are autonomous and entangled but can also be disjunct. While being irreducible to one another, each has certain autonomy, and each can be the locus of both experimentation and transformation.

6.4 | Making space in sound with others

As stated earlier in this thesis, artists around the world are engaging with art and its publics beyond classic institutional spaces such as university, studio or gallery settings; entering the social world through socially-engaged art practice and reflecting the core values and ideologies of DIWO, the acronym for Do-It-With-Others,

an expansion of the term DIY.¹⁴⁴ The term DIWO was coined by Marck Garrett and Ruth Catlow, co-founders of Furtherfield. This artist-led online community and arts organization was set up to express artistic co-creation as a decentralized method of peer empowerment in today's multitude. Furtherfield originally created the term DIWO (Do-It-With-Others) in 2006, to represent and reflect its own involvement in a series of grass root explorations. (Garrett, 2014). According to Travlou, creativity thrives in collaboration rather than competition. Thus, for engaging in DIWO practices, collaborating with others is paramount in shifting curatorial and thematic power away from top-down initiatives; shifting into co-produced, networked artistic activities (2014, p.291). In the soundwalking and soundmapping processes of the workshop described earlier in Chapter 4, the collaborative, co-composition of space, and the ethos behind this, reflects the escalating focus on co-operative praxis in recent years.

The feeling of co-presence that manifests during the experience of a soundwalk, can be described as an artistic collaborative process of co-discovering the space infused by creative agency; an awareness of sharing physical sensations with others. This reflects the core values and ideologies of DIWO. Indeed, a vast variety of project spaces, laboratories, workshops, participatory art projects and relevant activities have become spaces wherein creativity thrives, in collaboration rather than competition. For their greatest part, such workshops zero in on open-source software and/or hardware technologies, as well as into various aspects of contemporary digital art/culture and urbanism; what is described as "workshop culture" (Koutsomihalis & Rodousakis, 2015). This workshop culture usually implements a diverse range of art projects, often from multiple disciplines, suggesting a rather participatory approach to art making.

In many ways, workshop culture is both part of, and partly accounts for, a shift towards a culturally dispersed and interdisciplinary DIWO approach. Artist group Akoo-o's sound works adopt this participatory approach in their artistic practice, through workshops and creative collaborations, pointing to a fundamentally different

¹⁴⁴ The term DIWO was coined by Marck Garrett and Ruth Catlow, co-founders of Furtherfield, an artist-led online community and arts organization to express the artistic co-creation as a decentralized method of peer empowerment in today's multitude.

paradigm in artmaking. In resonance with DIWO trends, those involved in Akoo-o do not necessarily understand their role as artists, in terms of being makers/creators. They do not even see their function as guides/supervisors of others, but rather as a 'node' interconnected to a broader production hybrid. Still, in those hybrid settings, the artist of course is frequently accredited with more important responsibilities; yet the principal role is neither to author the work, nor to teach or manage the group; but to creatively engage and interact with others. The DIWO paradigm suggests that teaching, creating, exploring, researching and collaborating with one another, are inextricably intertwined at all levels of artistic production; from the conception of an idea, to the specifics of its implementation (Koutsomihalis & Rodousakis, 2015). Indeed, workshop culture has evolved as a well-standardised act in the Greek contemporary art scene, of which Akoo-o forms part, even though they have been organising DIWO workshops in other European cities as well. The reason for this is that workshops seem to be the most accessible means of artistic production in the Greek economic dystopia (ibid, p.40), however this 'workshop turn' should not be attributed to just the new economic conditions; there were pre-existent local tendencies in art and education, coupled with the influence of various international trends.¹⁴⁵

According to Born (2016), the dramatic growth of non-academic avant-gardes is evident in two prominent genres today, noise and sound art. Workshop culture, in the sense of a socially engaged sound(ing) art practice that I refer to in this thesis, is represented by these non-academic avant-gardes. In this, Born analyzed various musically imagined communities and found that they are mobilized by all those who stand artistically and ideologically opposed to academic digital music i.e. growing populations of unemployed graduates, artists and musicians.¹⁴⁶ These communities

¹⁴⁵ The Greek DIWO culture is indebted to relevant international trends: in almost all cases subsequently discussed, all involved - be they artists, instructors or curators - have either studied and/or lived abroad for some time or are foreigners themselves (Koutsomihalis & Rodousakis, 2015).

¹⁴⁶ This was part of the *MusDig* research programme. This engaged in mapping and analysing the far-reaching changes to music and musical practices afforded by digitisation and digital media in the developing and the developed world. The multi-sited ethnographies that resulted, touched upon issues such as how the creation, circulation, and consumption of music is changing with its pervasive digital mediation, how are popular music producers adapting in various places in the developed and developing world, and why has sound art emerged as a form in parallel with digital art music.

allow audiences to consist mainly of one's peers; and based on my findings throughout this research, I can assert that in the majority of cases, the audiences/publics/collaborators of sound walk/map workshops, are for the most part other artists, activists, researchers and academics. Even though such artistic-activist production is bound to attract certain kinds of audiences, characterized by a more or less explicit political orientation, the contemporary Greek DIWO culture seems to address all kinds of audiences irrespective of their social status (Koutsomihalis & Rodousakis, 2015, p.41); resulting in acoustic micro-community formation.

Differentiation between academic and non-academic scenes is also evident when addressing acoustic communities' identities. In university-based labs or gallery spaces, a hierarchical distinction prevails between the lab director, the leading artist, musician or philosopher, and the low or unpaid student interns and assistants tasked with collaborating on the putatively technical level, to achieve the director's artistic thought. In the DIWO workshop culture of artist-activist groups such as Akoo-o, artists inside and outside of the academy are engaging in social as well as material and spatial experimentation; subjecting the hierarchy of sound's ontology to revision, transforming the division of labor. Pervasive among DIWO experiments are the inquiries of improvisation, interactivity and participation as counter-practices to the hierarchy of composer, performer, and audience.

Regardless of what initially sparked it, workshop culture has been paramount for the non-institutional artistic landscape and offered pragmatic solutions to artists' very specific economical/financial challenges (Koutsomihalis & Rodousakis, 2015). Indeed, the prominence of the sound(ing) art scene, begets local, internet-based and politicized micro-economies of sonic production and circulation. Of course, experimentation and collaboration have been central to sound art scene, which resonates with the DIWO movement; apparent in an array of novel organizational forms that support musicians and artists. Ultimately, workshops are one of the most important means of artistic production and a viable solution to the very difficult economic conditions reached under the current conditions of global capitalism. Through them, prospective artists and art-enthusiasts are guaranteed relatively

cheap access to specialized education, and professional and semi-professional artists can acquire the necessary resources to realize their projects.

For Akoo-o and for other artists who deploy sound as a material to create sound art works such as subRosa, presenting the everyday condition of citizens, the process of audio recording is in itself a techno-cultural artefact. They record sounds and use them in ways that uniquely position listeners and construct situated sonic realities of place. The manipulation of the audible therefore challenges the fundamentals of what does and does not 'represent' a given environment; thus, rendering the experience of space as not a fixed product, but as a fluctuating process. Sound(ing) art works are therefore created with the intention of being more than passive sound repositories (Droumeva, 2017); they are interfaces for maintaining and communicating place, constructing a new place or forging new connections to a place. They have the potential to reveal and perform relationships between people, places and sounds. Acoustic communities are invited to explore their sound environment and share their understanding of it; they record, control, and produce a critical commentary on their own soundscapes, and in this they employ an activist position. To reiterate what was stated earlier, this requires a community that is ordered through processes involving its members as equals; who are open to acting, reacting and responding, to and with other community members.

Within this context, sound(ing) art also promotes a "reorganisation" of how the senses are perceived, felt, understood, and used (Ochoa Gautier, 2014). This knowledge is localized and embodied, culturally and socially embedded, and addresses the debates about the meaning of sonic place, memory and identity. According to Carol Becker, mapping a place that exists through memory and potentially through sound, is integral and distinctive to our present positioning in the world; it becomes a virtual place, "a site of true interrogation that engages the senses, the memory, and society while critically challenging us to find, and define the phenomenological world and our place within it" (2009, p.26). Through the imaginative powers of memory, artistic expression, and creative cartography, voices that have been silenced and spaces that no longer exist, are again revealed and public awareness increased. Here, the participative, collaborative and open-ended nature of these projects brings forward the social dimension of sound(ing) art; and can happen through online interactions

with other listeners, or through in-person interactions with artists, designers, or researchers in the context of soundwalks, collective soundmapping sessions, participatory artworks, and so on. This then provides a basis for integrating listening into various kinds of shared experiences of city life; and in this, sound art can be said to “recompose the city” (Ouzounian, 2014, p.168) . It offers a rewriting of its conventional mapping, to reveal some of “the other cities that exist inside the city” (Pinder, 2001) by positioning

a resonant idea that is co-created by, and shared among, its inhabitants, visitors and its listeners. By listening to our cities, we can newly understand them as a collectively generated, unstable and unfixed, imagined and experienced, lived and living composition: one that can be continuously heard and sounded (Ouzounian, 2013a, p.48).

In many cases, sound art works are supported by artists or researchers online that also contribute to and curate the various sound files, as in the case of many online soundmaps. However, there is a layer of openness, as audiences are usually able to access these files and thus form connections and discover patterns, “resulting in a kind of datascape and potentially a political statement through sound” (Droumeva, 2017, p.12). The members of the public that comprise the audience of such works are not the social media elites; in many cases they are specific stakeholder communities committed to urban renewal and cultural archival work. Such practices are also evident in the development of an urban planning and design culture that enables mobile participation. This culture incorporates not only professional data collection, but also the citizen data of mobile users, thus facilitating a more ‘bottom-up,’ citizen-driven planning process. Sound’s differentiating and multiplying movements, coupled with ways in which audition assembles together the near and the far, as well as the proximate and the distant, formulates a model of public life between destinations and identities; a public open to the *other*. LaBelle characterizes it as an “*emergent public* whose drives nurture not so much the formation of group identity, but the proliferation of all that may lie in-between and around such formations” (LaBelle, 2016, p.284, italics in text).

LaBelle’s study of *Acoustic Territories* (2010) is concerned with sound’s role in the production of space and subjectivities; and of the meanings created and communicated through sound. In examining ways in which sound creates territories,

and the contrast between public and private space in particular, LaBelle (2010) calls for a more nuanced understanding of the spectrum between silence and noise. He invites the reader to rethink the “simple formulation that “noise is a form of acoustic violence”,” thereby “considering how silence might also perform violently (p.80) when used to *separate out*, to *ward off*, to *contain ...*” (p.66, italics in text). In defence of sound's potential to produce fruitful connections even as it creates conflict, LaBelle invokes Chantal Mouffe's “agonistic space,” in which listening to the agonistic interplay between sound and noise serves as a requisite platform for plurality, discourse, and democracy.

The idea of noise's power to shape our experience within urban space, as well as our perception of space, what Atkinson (2007) has termed as “sonic ecology”, can give us a means of exploring different elements of urban life. It is important to emphasize how in fact understanding noise beyond its traditional definitions - merely undesirable or out of place - is very important to understanding any soundscape and its socially organizing capacity as a whole. The shape of our experience with noise and the concept of play, can serve as a productive force guiding us through playful encounters with noise. They may also very well provide a framework through which to re-conceptualize our relationship to sound in general, and to reflect on its potential to position percipients socially in relation to one another. LaBelle (2006) also emphasizes noise as a property of (urban) relationships and also of social encounters, which through its disordering potentiality, explicitly supports dynamics of alterity and social tolerance.

However, sound and noise does not always equate to democratisation, liberalism, and inclusion; as Patch (2009) posits in his treaty on the futurist noise aesthetic, “the democratic nature of noise is not without its fascistic other” (p.305); hence the movement of Italian futurism is worth considering here. The futurists celebrated their noisy musical experiments (*intonarumori*), proclaiming that a new “art of noises” would bring the new noises into the traditional arts of both ear and eye (Goehr, 2008, pp.114–115). The Italian Futurists found themselves fully supporting fascism in Italy (Patch, 2009, p.305), celebrating industrial production, capitalism, and even the noise of war. Adorno, who also recognized the necessity of violence of experimental art to react to what music has been for him “a silent form of art, ”encouraged the use of

“explosions, shocks, and fireworks”, although differentiating them “from those of the futurists, [...] whom, he contends, tend to celebrate things only “for their own sake”” (Goehr, 2008, pp. 132-133). Noise for the futurists was “ideologically articulate; it enunciated the sounds of both the present and future, as the West pursued the colonization, industrialization and exploitation of the globe” (Patch, 2009, p.324); and I argue that this can expand to include any sound, noise and music.

Michael Bull (2004) describes the mobile privatization of personal listening devices as “technologies of accompanied solitude [that] shrink[s] space into something manageable and habitable” (p.177). The privatizing and colonizing aspect of this technology has the capacity to aestheticize experiences of space; similarly, Patch warns that “one of fascism's modus operandi is the aestheticization of politic” (2009, p.305). Soundwalks and soundmaps do aestheticize particular spaces of the everyday, but this mode of cartographic performance also has the potential to “interanimate” and shape space (Basso, 1996). The process of “acoustic territorialisation,” which according to LaBelle (2010) is inherent to acoustic space, becomes a political process that allows for participation (2010, pp.xxiii–xxiv); a sonic-spatial politics of the urban condition.

6.5 | Sound(ing) art's agonistic intervention

In the first part of this chapter I argued that soundwalks and soundmaps, as site-specific sonic practices, can comprise the acoustic space wherein acoustic communities emerge. These are intersecting micro-communities characterised by ephemerality; yet they are powerful in/albeit their transience artistic. A case could be made to extend the notion to any group experience in which sound is foregrounded, as Coyne describes in *The Tuning of Place* (2010): a group of party-goers, young adults claiming space by babbling loudly as they walk through the mall, a family having a loud argument, birdwatchers, people listening to fireworks in the distance and worried about the effect on their pets. Even though these are as well communities constituted in sound, I argue that the groups that are forming around site-specific sonic practices, are a particular type of acoustic community, an artistic acoustic community, that in turn informs our understanding of this much wider and diverse acoustic constituency; and it does so by enabling particular relations to be founded

upon personal life experience, kinship and emotional knowledge. Lorde (1978) and hooks (1994) argue for the formation of communities founded upon personal life experience and emotional knowledges. For Lorde, sharing of joy, “whether physical, emotional, psychic, or intellectual,” creates the productive conditions for mutuality and empowerment, as it is the “basis for understanding much of what is not shared between them, and lessens the threat of their difference” (1978, p.56). Lorde’s approach suggests a richer integration of joy and pleasure to bridge the spiritual with the political. bell hooks then argues that, bridging life lived and the formations of public representation, creates intimate relationships and emotional knowledge that sustain communities and move bodies: “Passionate politics” is a mode of coming together that may act as “a potential place of community-building” (1994, p.217).

Olmedo suggests the term “citizens of the work” as a concept that identifies “a very particular attitude in the reception of sound art in public space”, which need not necessarily be associated with sound art, but can widely be used for works that are “designed specifically to be received by citizens” (2012, p.48). To consider “citizens of the work” immersed in the acoustic space, we need to take into account not only the acoustic phenomena, but also the socio-political and affective ones that coexist with the spatio-temporal condition of citizens. The possibility of sound to move us toward a shared sensibility - from which we can simultaneously build a “common sense” by way of sonic criticality - challenges conceptualisations of ‘form’ and ‘content’ that still linger over artistic practice today. Sound is not just present as a phenomenon or vibration; it is also seen to be the result of subjects’ perception in and of space. The subjectivities of “citizens of the work” interlace with their space-time experiences and are considered to be integral to the artistic praxis; part of a process and a procedure that compounds people’s subjective presence in the city. These interconnections between processes of spatial transformation and processes of political subjectivation, reveal interesting potentialities for contemporary urban life and public space.

According to Mouffe (2008), critical artistic practices can play an important role in overturning the prevailing authority in the “agonistic” model of public space. She notes that in the current era, artistic and cultural production has lost its critical power, as it is now integrated into capitalist productivity, which automatically alleviates and neutralizes any critique. However, she goes on to offer a promising alternative of

criticality in artistic production, in paving the way for artistic practices to play a pivotal role in society. She suggests opening up the field of artistic intervention in social spaces in order for artistic practices to play a crucial role in the agonistic struggle.¹⁴⁷ Here, Mouffe invites us to view art and politics as interrelated, arguing that it is not useful to make a distinction between political and non-political art. For her, it is pivotal to engage with art critically, and to consider different modes with which art can contribute to questioning the dominant hegemony. In this, critical art is constituted by diverse artistic practices, which aim at giving voice to those who are silenced within the existing hegemonic framework; and these practices can adopt an agonistic approach described as artistic activism, which aims at challenging the existing consensus.

This artistico-activist practice is not an essential pre-requisite for artwork to be able to stand against the hegemonic model of predominant consensus; art can play a critical role in many other ways. First, there is the kind of artwork that more or less directly engages critically with political reality. Then, there are artworks that explore subject positions or identities, which are defined by otherness, marginality, oppression or victimization; for example, feminist art, queer art, art made by ethnic or religious minorities. In addition, there are categories of critical art that interrogate their own conditions of production and circulation. Finally, we can also enounce about art as utopian experimentation, which attempts to imagine alternative ways of living (ibid). These very diverse artistico-activist practices become critical if they are seen as agonistic interventions in public spaces; albeit that their aim is not necessarily to create something radically new. In fact, Mouffe insists on forgoing the avant-garde idea that to be political means to produce a radical critique. She goes on to argue that

¹⁴⁷ Agonistic struggle entails the configuration of power relations around which a given society is structured. The agonistic approach recognizes that society is always politically instituted and that where hegemonic interventions take place are, they come after previous hegemonic practices. For the hegemonic model, public space is conceived as the terrain where consensus can emerge. For the agonistic model, public space is the battleground where different hegemonic practices are confronted, with a final reconciliation being impossible. In the agonistic model, public spaces are always plural, and the agonistic confrontation takes place on multiple discursive surfaces. This Habermasian concept of public space, or “public sphere,” requires the availability of a consensus without exclusion which is proved to be impossible by the agonistic approach. Arendt’s notion of “agonism” is “agonism without antagonism”: For Arendt to think politically is to develop the ability to see things from a multiplicity of perspectives, envisaging public space in a consensual way (Mouffe, 2008).

this sort of moralistic consideration of critical art, is characteristic of a propensity to replace aesthetic judgements by moral ones; assuming that these are also political ones. For Mouffe (2008), this in fact is anti-political.¹⁴⁸ In sound(ing) art works we can identify both the agonism and the agonistic approach: sound's vibrational and relational "natureculture" imparts it with a wide range of possibilities to transform socio-spatial practices. Resonating in or outside of musical/sound art structures, sonic sensibility has the potential to inform emancipatory practices: "vibrations support more intimate relations, allowing vibratory models of alliance and sharing and constructing togetherness that may carry great social and political potential" (LaBelle, 2018), thus being capable of overcoming distinctions between producers and consumers, and between utopian and heterotopian spaces.

In expanding the discussion further and reflecting on the urban soundscape beyond object or artistic intervention, I now consider how sonic agency informs agonistic interventions in public spaces. Indeed, agonistic sound(ing) art practices that resonate a DIWO ethos, can produce an extensive and relational means for dialogical exchange. Sound(ing) arts invite their publics to form artistic acoustic (micro)communities through affective processes intrinsic to finding place, and to "construct new social formations, movements and nonmovements and overall emancipatory practices of daily life" (LaBelle, 2018, p.2). Here, the creativity inherent in the engagement and interactions between subjects of the acoustic community, is also considered a nomadic process, in that it entails "the active displacement of dominant formations of identity, memory, and identification" (Braidotti, 2011, p.35). Indeed, this form of creativity has the power to actuate heterogeneous "becomings" of the subject, in that creativity is triggered by the affectivity of the imagination and memory to invent "new figurations and new ways of representing the complex subjects we have become" (p.238).

In engaging with this ethos, the subjects that comprise these artistic acoustic communities are clearly committed to processes of change and to "a strong ethics of

¹⁴⁸ According to Mouffe (2008), in our post-democracies where a post-political consensus is being celebrated as a great advance for democracy, critical artistic practices can disrupt the smooth image of corporate capitalism, bringing to the fore its repressive character and by contributing to the construction of new subjectivities.

the ecosophical sense of community – of “our” being in *this* together” (Braidotti, 2011, p.210, italics in text). In many ways, a state of coexistence, of being in the world together simultaneously, instructs the ethics for their interactions, as well as those between humans and more-than-human others. A collectively distributed consciousness emerges from this, which requires the subject to become active and creative. Most importantly, the creative agency of the acoustic community is open to possibilities of collective belonging, without making social identities irrelevant. Subjectivity thus becomes a matter of active creation, established by the sound’s affective performativity. This productive notion of the “natureculture” of sound, affords a self-reflective state of being, because it gives the individual the opportunity to reflect on their individual experience, but with a constant, or at least at times strong, awareness of others.

6.5.1 | Agonistic sonic agency

Born (2013) discusses sound, music and noise’s capacity to enliven the sonic publics, drawing from the prominent use of sound in the performance of political protest. In that context, sound, noise and music are employed to enhance the potency, presence and co-operation of a democratic political public, forged through modes of participatory and agonistic performance. To shape this argument, Born (2013) draws on Hannah Arendt’s perspective on the use of performance as a model for the pluralistic, participatory and agonistic qualities, which according to Arendt, are fundamental to political action in the public realm. Similarly, the methods of the DIWO ethos of sound walk/map workshops, promote conviviality, collective action, consciousness-raising through field recording and listening and a combination of high- and low-tech media.¹⁴⁹ These sound(ing) art practices reflect on feminist traditions of a politics of location and dislocation. Working with sound and listening, they bring to the fore the situatedness of the listening experience. The dislocation of environmental or ambient sound from the given location, and its (re)production within the hybrid space of another location, fuels a unique experience. In the case of the *Impossible Inaudible Soundwalk*, it not only transformed our spatial context and awareness of location, but also our perceptual and cognitive knowledge of that place.

¹⁴⁹ Similar to those of feminist artists of the 1970s.

By making place strange, it can be argued that sound walks/maps introduce “difference and discrepancy into our perceptual frame” (LaBelle, 2006, p.237). Indeed, sound(ing) art that features field recordings and soundscape compositions, emphasizes the sonic particularities of a given environment; affording intimacy and sensitivity “by creating a locational contrast between the immediate and the displaced site-to lead the ear into a listening of place, place itself is made alien” (ibid). And it would appear that this alien presence of sounds, is the reason why this sound(ing) artworks are often used for mapping the global economy on affective labour, urban environments and the tourism economy, biospheres and health conditions.

Viewed in this way, the situated approach it can be said, aims at involving the audience in a public debate; realigning knowledge-making practices and facilitating artistic creativity. In the words of the artist collective subRosa (2001) it is about “making waves on the homogeneous surface of striated space creating spatial pockets of resistance, “becoming autonomous zones”, “being useless and playful while generating shared knowledge and cues for responsible action.”¹⁵⁰ In their artistic practice, which features a participatory and performative approach as well, the shared production of space requires gaining awareness of one’s position within the relational ecosystem from various points of view, including cultural, emotional, aesthetic, perceptive and cognitive. This approach then allows for a heterotopic space to emerge, where the ambiguity and tensions of solidarity, struggle and creative resistance “can be singular and collective, aesthetic and ethical” (Guattari, 1995, p.132). In this sense, spatial exploration is the product of collaborative creativity and sharing.

In this context, the term *āwāj* is a productive concept: used in many South Asian languages *āwāj* can be translated, depending on context, as noise, sound, or voice. According to Kunreuther (2018), can be used to understand the modern political condition and issues of citizenship, state, the individual, the subject, the public sphere, human rights and the like, in relation to sound’s political role. Kunreuther’s ethnography of sound offers a way of thinking about how publics and their presences

¹⁵⁰ According to subRosa (2001), the striated city gives rise to new smooth spaces, where smooth “pockets” continue to make resistance possible. The way to resist is to cut through the institutions, lineages and genealogies that mark the striations of the state.

are made, by discussing the conditions under which sound and silence constituted a democratic soundscape during a sound/radio art performance/installation in public space (2017). From the such a viewpoint, it can be said that sound art inspires us to elaborate on new modes of collective knowledge production, with its producers free to investigate the criteria for ethical, socially engaged scientific and artistic work (subRosa, 2011). In the long run, it urges us to consider the importance of sound in cultivating political subjectivity, by promoting a consideration of sound that produces citizen knowledge, which in turn is able to resist to apparatuses of authority, specialization, or privatization.

Ultimately, sound artists in their praxis and in their works, try to include a multiplicity of perspectives; particularly where participants are involved in the production of the artwork. However, since it is not possible to involve every single perspective, there is the danger that when voices are unified, it is practically tantamount to a replay of the hegemonic model. The ethos of collaboration, as discussed in this thesis, does however at least allow for constructive cooperation in ameliorating this hazard through dialogue. In other occasions, artists consciously create sound art works that promote the agonistic model, by bringing to the fore in the public domain, the conflict between those multiple perspectives. From whatever standpoint they are seen though, the possibilities afforded by sound(ing) art open up a broad sphere of ethical and political questions: Who produces sounds? In what form? Who listens? Who has the authorship? What are the relationships between them? Thus now, in attempting to answer these questions, I will argue in favor of listening as critical praxis for a situated sound art in the concluding part of this thesis.

Chapter 7 | Conclusion

7.1 | Listening together, critically: a thesis overview

This thesis, in exploring how sound art practices engage with particular spatial dynamics, interrogates an articulation of sound art that emphasises listening and audile techniques as a means of enabling creative agency and artistic collaboration. I investigate the conditions in which listening bodies inhabit and move in spaces, perform practices, and create knowledge together. I also examine how they become animated by sonic and musical agencies, while being enlivened by heterogeneous forms of sociality and of their intersectional identities. Focusing on listening, walking, and mobile audio devices I explored how they can co-compose acoustic city spaces and artistic acoustic communities, and I highlighted how sound enables us to revisit our relation to space. From exploring the interaction between sound(ing) art and the public space, I demonstrated how people and places are involved in creating the content and in affecting the structure of sound art, both individually and collectively. I applied the concepts of collaboration and creativity to describe the shape of my experience with sound, to argue that interpretation and creative expression are encouraged through affective encounters, collaboration and playful audio content.

The original thought and scope of this study was focused upon creativity within collaborative practices; where sound and listening are the tools for investigating, knowing, and interacting with the surrounding world. I assert that the interrogation of the urban environment through the filter of the sonic promotes further understandings about the significance of sound in society. In this, I presented the various approaches to sound as the material for doing art and also to produce experimental cartographies that have the potential to inform communicative and political processes. The results from the workshops and soundwalks indicate that the audile techniques that facilitate the experience of the sound art work are not just cognitive or mental; but rather involve and are shaped by bodily training that enables emerging acoustic communities to consider their practice around the politics of sound. In exploring the development of a sound art practice, where everyday and artistic listening practices intertwine with agency and creativity, this thesis alludes to the possibility of a politics of sound that embraces a connected and collaborative

world. I argue that sound can make us re-consider our relational experiences; how we relate to others, ourselves, and the spaces we inhabit. Acoustic communities come together in their experience of sound(ing) art and in this they can assemble inclusive acoustic spaces where ‘experiencers of the work’ can be transformed to ‘citizens of the work’. As Voegelin (2019) suggests, their activities may be regarded as an attempt to “generate and articulate the possibility of the possible in relation to sound in the sphere of the political” (p.4).

Within the realm of the politics of sound, communal listening, as “restless acoustics” (LaBelle, 2016, p.278), may feature as a strategy for public life by which identities and communities can find a place of welcome, a place to belong (hooks, 2009, p.183). In other words, to support the figure of a sonic body, one that, in tending toward publicness, toward shared property, might provide an active counterpoint to the privatization of our civic life (LaBelle, 2016, p.285). Listening then, as a form of social engagement, may be used by sound art to “de-familiarize everyday sounds and voices, thereby delaying the point at which a sound’s causal and referential properties are identified” (Ultra-red, forthcoming, in LaBelle, 2018, p.35). LaBelle calls this “horizontal listening,” a form of listening that has the potential to build new relations to the social and political realities that surround particular communities.

This way of listening, informed by sound art, acknowledges the affectivity and the materiality of sound, which as a physical, acoustic phenomenon affects the entire body. Experiencing then the sound art works discussed in this thesis, listeners are affected, effected, and construct meaningful perceptions of place that are situated. However, since we don’t all listen from the same place, a critical listening thus turns to the philosophical tradition of phenomenology to understand subject-object relational intensities and how such relationships contour our experiences of place. I argue that via listening to sound(ing) arts we can theorise about how a place exists, what its importance is, and how this importance is exploited when we hear with our feet. I argue that knowing place through sound and walking we can deploy mobility and locative media to instruct alternative ways of mapping space in sound and animate sonic ways of knowing, sensing, and sounding place. Listening then may become also the means for queering our orientation, producing a form of affective knowledge, one that acts at the basis for a “listening activism” – a type of critical

listening that can produce alternatives to visual capture apparatuses (LaBelle, 2018, p.39). Such activism can afford a bodily orientation that may then be queered through hearing, listening, and voicing (Ahmed, 2006).

In many ways, listening is often presented as a crucial political act; its possibility for “a practical and collective capacity and empowerment” (Voegelin, 2019, p.10) makes it a vital component of activism, citizenship, and community-building. As such, listening has been at the heart of many ethico-aesthetic practices, including acoustic ecology’s ear-cleaning exercises and Pauline Oliveros’ deep listening (Thompson, 2017a). Yet listening’s intersections with listening subjects, and their spatial explorations that are the products of collaborative creativity and knowledge sharing, tend not to be addressed by these important figurations in the field of sound studies. This thesis then, in adopting a sonic-social phenomenology to investigate sound(ing) art in public urban spaces, addresses the wide range of possibilities for acoustic communities to transform socio-spatial practices whether resonating in or outside of musical/sound art structures. In light of this, I connect listening to a situated sound art practice that demands critical listening. I argue thus that soundwalks and soundmaps, as site-specific sonic practices, can revitalise the field of sound(ing) art; enabling a collaborative and critical listening praxis founded upon personal life experience, kinship, situatedness, and shared emotional knowledge. This situated and communal listening is part of a process and a procedure that compounds people’s subjective presence in the city and can reveal interesting potentialities for contemporary urban life and public space.

In this regard, I argue about sound art’s potential to produce particular spatial effects, by affording a zone of contact by which strangers meet and assemble inclusive acoustic spaces. And this is regardless of whether it is a micro-community that convenes to create a site-specific sound art work for their neighbourhood, or an imagined community that contributes field recordings to a soundmapping project about their city. More than anything, a sound art that demands this sort of communal listening, generates, according to LaBelle (2016), auditory events “by arriving and departing, summoning and evoking, forcing bodies into temporary contact, hinging together *a public in the making*, though one that we may never actually recognize” (p.285, italics in text). Sennett (2012), makes a similar argument conducive to

cooperation as the way to perform urban citizenship; he contends that the very foundations for cooperation can be found in learning to listen and discuss rather than debate. It is not necessary that sound should or must cohere into a traditional form of community; it is a force that can bring into proximity the represented and the non-represented (LaBelle, 2012).

Within this context, the sound art works I discuss in this thesis, I would contend are examples of the potential of sound(ing) art to reveal the intimate connections between acoustic communities and their urban environments. This can be done through creative cooperation that highlights the relationships between bodies, movements, sounds and spaces. Sound(ing) art works propose drifting through a city, understanding the city not only through experience, but also through the exchange of experiences, playfulness and creativity, promoting various social encounters (Silverstone & Sujon 2005). To this end, this thesis describes how I developed experimental sound methodologies that led to the organisation of a soundmapping and soundwalk workshop, together with the artists group Akoo-o (Chapter 4), and to the creation of a map-based sound sharing, collecting and editing interface, as well as an audiovisual installation that represented the emotional experience of walking around in the city of Edinburgh (Chapter 5). In this practice I have shown that sound walks/maps may extend the experience of the perception of the city and address issues of agency and participation through playful collaborations and digital technologies, creating a kind of hybrid urbanism.

Of course, in this milieu, locative media and mobile audio technology provide opportunities for artists and the public to relate physical urban environments with digital information, in order to create hybrid spatial experiences (Talianni & Charitos, 2013). The familiar space of the city is transformed into a new and unexpected environment. And indeed, in the case of sound art works as research/artistic projects, the creation process, together with the results of this process, calls on the listening public to think of the performance as taking place via the movement of human bodies through space. Here, the use of locative media in emergent artistic practices, may result in the creation of digital representations of the city that are continuously augmented. These then may relevantly serve the emerging needs of city dwellers, while affording novel ways of public activity (Charitos, 2007), thereby “situating

the performance in public or already otherwise occupied spatialities and at the same time mobilizing it” (Gopinath & Stanyek, 2014, p.4). Contemporary city dwellers can thus discover and act on opportunities to appropriate their own city; to create or even re-invent shared spaces.

7.2 | Listening further: a situated sound art practice

Sound art as critical praxis is not just about the practices of doing and undoing knowledge, but also about the subjects of knowledge; it needs to create new networks, new collectives, and new encounters. It is not enough to make the soundscape available, as a piece of information that can be archived, preserved, or experienced; it must be performable and, in this manner, ethically and politically usable. This produces a methodology that is very important for the development of the concept of “the sonic agent” (LaBelle, 2018): the situated listening method. And much of this research points to the fact that only situated listening can embed a critical sound art practice in a perspective that avoids generalisations and abstractions, as well as to relate sound and subjectivity to social and political struggles.

By its very nature, a situated listening cannot exist as a closed or separate system of representation, nor can it portray a single truth; in fact, remaining open to different social dynamics and possibilities, it works not only as a descriptive, but as a transformative, enactive media. This methodology considers ‘being-in-the-world’ as a situation requiring an ever-increasing interactivity and forms of shared construction. It shifts our attention away from sound as an ‘object-in-itself’, toward a critical sound art praxis; a set of inventive and enactive actions in which space and its representation are co-constituted. In this it can be argued, that the key to this performative representation is to re-embody listening as an active/activist practice. In the environment of our cities, according to de Certeau (1984), this is done through walking as a way of sharing the same space:

Walking affirms, suspects, tries out, transgresses, respects, etc. the trajectories it “speaks.” All the modalities sing a part in this chorus, changing from step to step, stepping in through proportions, sequences and intensities which vary according to the time, the path taken and the walker. These enunciatory operations are of an unlimited diversity. They therefore cannot be reduced to their graphic trail (p.99).

Viewed in this way, sound, as an alternative but interdependent layer to the visual experience, constructs in-between or heterotopic spaces of lived experience that can be represented in sound art works. This calls for a situated listening praxis if we are to engage in creative and expressive, critical sound art; with the purpose of this sound art practice being to create in-between spaces of encounter, which give voice to human and more-than-human identities, instead of spaces characteristic of specific identities. Don Ihde (2007) asserts the capacity of humans, animals, and things to have a voice or 'give' voice that will speak about themselves and the world. However, as Neumark points out, it is important that we take this audition further and listen in different ways in order to "deepen the understandings of the relations between people, animals, and objects" (2017, p.388).

Sound(ing) art as critical practice instils a "commonality of feeling" and a kinship that, according to bell hooks (1994), supports deeper relations that specifically bridge intimacy, family relations, and friendships with that of institutional and political life. This is expressed not only through the sharing of words and discourses, but also relies upon emotional and personal knowledges and the capacity to empathize. Such mode of coming together in urban space as a "site of desire and longing" affords "a potential place of community-building" where the community is constructed on different bases (hooks, 1994, p.256). This is a "beloved community and it can exist in diverse spaces, as long as difference can find a place of welcome and belonging in those spaces" (hooks, 2009, p.183).

In many ways, sound(ing) art affords simultaneous potential for collectivity; be it its capacity for crowd-sourced community engagement, or the opportunity to learn new skills during the ongoing process of co-creating, while sharing ideas (Nowotny et al, 2003); all of which enable various kinds of community formation. In describing their notion of a "sonic commons," artists O+A point out that what we hear in urban space is both a given sonic event and also shaped by the built environment (Odland & Auinger, 2009). City spaces can thus be heard as various layers of the past that resound in the present, since their built environment has resulted from past and present expressions of cultural, social and economic power. So, both in listening to cities and in sonically mapping them, acoustic communities can interpret what they hear as a layering of those underlying interests and power mechanisms (ibid). Indeed,

sound art that is inspired by the sonic geographies of the region/s represented and/or by the networks of its imagined communities, can be a vehicle for community engagement; contributing to a formation of a public sonic discourse, as well as an audible reterritorialization of place and the socio-political relations within it (Droumeva, 2017).

Ultimately, such experimentation with new audience relations and the intent to change conceptions of space, construe the evolving material, aesthetic, and ethico-political foundations of sound(ing) art that requires the participation of distinct, localized publics. Sound operates in support of an emergent public by specifically bringing together bodies (human and nonhuman, objects and things) that do not necessarily search for each other, forcing them into proximity, into a form of nearness (LaBelle, 2016, p.276). Ouzounian contends that, in performing space as a social construction, shaped from physical, social and political geographies – what has been termed as spatial turn - sound(ing) art can engage with the public in meaningful ways. It can produce a “spatial sound practice ... not only as a poetics, but as a politics ... Such a critical spatial sonic practice does not merely ‘happen in’ space, but is poised radically to transform the very terms of its constitution” (Ouzounian, 2013b, p.74).

In this context then, it seems more productive to refer to citizens, rather than percipients or audiences of the artwork (Olmedo, 2012); and in the space of the city, it would appear that acoustic communities must consider a complex network of social, political and ethical circumstances. Sounds introduced by these communities into the context of the city, can thus establish a dialogue with all the dynamics of space. This means considering the architectural and urban façade of the city, while taking into account the political, social and ethical procedures that manage it, as well as sound’s competency to create a closer relationship between the urban space and subjects. This “transductive” (Helmreich, 2010) work can eventually lead acoustic communities to listen inside, outside and beyond the notion of the city itself, and to construct inclusive and agonistic acoustic city spaces.

7.3 | Sound art’s political potentiality

In Chapter 4, I have given a phenomenological account of the double consciousness which is enabled by the interaction of bodies within the performance space; I consider

this double experience as a social process. More than that; engaging with others now becomes an embodied social process, through the shared aesthetic experience, co-presence, and interactions through locative audio, soundscape compositions, external noise and physical navigations. The social processes among bodily subjects and non-human ‘actors’ contribute to co-determining the course of the soundwalk and each element is in turn determined by it. Out of this relational and embodied experience, emerges an acoustic community, in whose formation non-human participating agents can be included. These sonic agents play an important role in the creation of a shared state of ‘we-ness’ by shaping the process by which members of the acoustic community share the experience together. I argue that this process, emerging from embodied interaction, has the potential to cultivate a particular situation, relationship and/or mode of behavior that can also inform a political process.

In many ways therefore, sound(ing) art works that call for listeners’ participation, are creating networks of “people who were once strangers but could become allies and even friends” (Huron, 2015, p.977) and it is in this context, according to Huron, that the opportunity arises for changing the “power balance in [a] contested urban environment” (ibid). A critical sound art practice, makes it possible to cast listening as activism, which may challenge existing demarcations or structures of domination; and the potentiality of this communal listening, may indeed aid in discovering and nurturing new formations of solidarity, by also explicitly relating us to things beyond the sound:

The silences of still bodies, the vibrational and rhythmical intensities of collective acts, the tonalities disturbed or distributed by cacophonous volumes, and the co-soundings and echoes of earthly creatures and matters – these are equally defining of the public sphere and expressions of political desire. To enact one’s freedom of listening is to necessarily aim for a broader and richer engagement with the range of voices and things to be heard and shared (LaBelle 2018, p.160).

What may happen in instances of collective listening? I would contend that forms of listening together, can strongly support diverse discourses and projects in the fields of sonic and spatial practices, auditory culture and performativity, as well as experimental sound art and political thought. This type of sound art can promote a way of listening together critically, which considers the specifics of location and (sound) media, and co-produces narratives generated from cultural work and its

place; particularly through site-based research, collective actions, and collaborative projects. This might be a listening activism directed at particular sites, such as around situations of conflict, or in other situations within communities, being applied to spaces of presence and emptiness, locating us around what is missing. In this way, an acoustic community of listeners ...

in the squares, or in the classrooms and market places, the backrooms and storefronts, may perform to create a gap, a duration drawn out, detouring the flows of normative actions, of declarations and decrees, with a persistent intensity – a nagging quietude, possibly: this act of doing listening, together; and by gathering attention it may also create an image: the image of the listener as one who enacts attention or consideration and, in doing so, nurtures the conditions for mindful engagement (LaBelle, 2018, p.161).

Building upon this, now as I approach the end of this research endeavour, I find it necessary to address the need for a re-evaluation of the politics of listening informed by a situated sound(ing) art in a way that takes into consideration the uncertainties associated with listening praxis. This approach, situated within the study of contemporary auditory culture, is also a reference to “sound’s agentic potentiality” (LaBelle, 2018), and to the “political possibility of sound” (Voegelin, 2019), in line with most recent sound studies scholarship. It is also inspired by the notion that even though an acoustic community is formed by engaging with sound and space collaboratively and playfully, as has been demonstrated in this thesis, this is not always an adequate or effective mechanism that will transform listening into an activist or political praxis. Ultra-red describe this eloquently by recounting their experience attending a group critique of a PhD art exhibition in Glasgow. They say:

[m]uch to our surprise, the students had chosen to structure the critique around the *Shadow of Shadow* protocols.¹⁵¹ Whilst this was an attempt to engage critically with a piece of artwork, this seemed to be the only investment of all those in attendance... [it] had become devoid of political stakes in the context of a conventional academy art critique (Ultra-red, 2015, pp.32–33).

¹⁵¹ *In the Shadow of Shadow* is a sound art project by Ultra-red. This comprised a series of events, such as listening walks and soundscape recordings held at the community-run Kinning Park Complex in Glasgow. The participants were members of the community that collaborated with Ultra-red to experiment with their usual listening procedures, resulting in the production of a set of protocols for a listening session.

As Ultra-red (2015) mention, this kind of appropriation is inevitable in the art academy. It is common that practices and processes that were born in political struggle become co-opted in order to produce a practice of criticality that is removed from its original politically motivated inquiry and reduced to an aestheticization of the experience. Soundwalks and soundmaps can aestheticize particular spaces of the everyday, but these types of sound art also have the potential to “interanimate” and shape space (Basso, 1996). The process of “acoustic territorialisation,” which according to LaBelle (2010) is inherent to acoustic space, becomes a political process that allows for participation (2010, pp.xxiii–xxiv); a sonic-spatial politics of the urban condition.

In avoiding appropriations therefore, and in truly enabling sound art’s political potentiality (Voegelin, 2019), what this thesis suggests is to focus on the opportunities it affords for imaginative creativity through play and collaboration, paired with situated knowledge and critical listening. This practice can shift “curatorial and thematic power away from top-down initiatives into co-produced, networked artistic activities” (Travlou, 2014, p.291). In this respect, a network of acoustic communities, engaged in amateurish, distributed and collaborative actions from within the urban environment - echoing the tradition of ‘citizen science’ - seems a more appropriate approach toward rendering sound art a creative practice that is an aesthetic experience but also an ethico-political intervention. Citizen science entails a definition of citizenship in which “citizens are [...] more active, aware agents of their society, conscious that the well-being of their communities largely depend[s] on the extent and quality of the commons that they share, protect and work upon” (Iaconesi & Persico, 2015 quoted in Timeto, 2015, p.140). Accordingly, an artistic genealogy of sound art can retrieve listening’s performative and creative potential.

Blurring the distinction between human and non-human actors inside multiply mediated and jointly performed acoustic spaces avoids framing the theory and practice of sound art inside a representational perspective, still implicit in most actualisations of sonic materialism. The entwining of bodies, space, and sound, material and immaterial flows, artistic wandering and migratory mobility, can create both an aesthetic piece and an ethico-political intervention, and defines a sound-based artistic practice that is not only collectively conceived but also employed for

collective purposes (Timeto, 2015, p.118). Sound teaches us that space is more than its apparent materiality, that “knowledge is festive, alive as a chorus of voices” (LaBelle, 2006, p.xi), and that to produce and receive sound is to be involved in connections that make privacy intensely public, and public experience distinctly personal. From this perspective, the sound art projects that I have discussed in this thesis, may encourage “a collective making of this life lived” (LaBelle, 2018, p.162); and field recording and soundscape composition may be deployed by sound art as a political action, with the aim to construct through listening, agonistic acoustic communities.

As has become clear, the term ‘community’ is not unproblematic; it is complex and ambiguous yet assumes infinite possibilities. Acoustic communities formed through listening to sound(ing) arts in public spaces, are gathering in DIWO artistic practices that involve different actors in interactive collaborations. The DIWO approach inaugurates a new kind of aesthetics, enacted on top of participation, engagement and a rather loose distinction between artists and audiences that are in this case acoustic communities. It brings to the fore issues of sociality, materiality and spatiality, due, in part, to the intensifying interdisciplinary migration of ideas and cultural politics between music, the arts, sciences and the social sciences. DIWO approaches not only call for new kinds of - less hegemonic - artists, they also call for completely new kind of audiences: ones that wish to actively engage with the production of art and are considered “citizens of the work” (Olmedo, 2012). Artistic acoustic communities formed in the context of workshop culture facilitate the exchange of situated knowledge/expertise. Such kinds of audiences - given also the interdependence of contemporary DIWO practices with pervasive computing, new media and open-source technologies, social media and the digital revolution in general - account for a critical practice of listening. Listening and sound then construct sonic appearances wherein agonistic acoustic communities materialise.

One can argue that such a radical mode of spatial perception is the product of sound(ing) art’s politics of locations, perspectives, practices and epistemologies, concerned with situated knowledge, relationality, and the link between epistemology, ethics and politics (Haraway, 1988; Mouffe, 2000; Barad, 2007; Bennett, 2010; Feld,

2015; Goh, 2017; Thompson, 2017b).¹⁵² It is also informed by Steven Feld's (2015) definition of acoustemology; a coming together of acoustics and epistemology "to investigate sounding and listening as a knowing-in-action: a knowing-with and knowing-through the audible" (p.12). Departing from "metaphysical or transcendental assumptions surrounding claims to 'truth' [acoustemology] [...] engages the relationality [and the situatedness] of knowledge production" (ibid) and understands listening as "relational and contingent, situated and reflexive" (p.15). In this sense, acoustemology can animate the experience and agency of artistic acoustic communities.

In this framework, sound art may inspire a revised understanding of space and of representation according to a performative non-representational perspective (Timeto, 2015); through the performativity of knowledge practices and through the prevailing of situated listening in engagements with place and space-time (Feld, 2015, p.15). Echoing Mouffe (2000), I argue that sound(ing) art too "requires allegiance to the values which constitute its 'ethico-political principles'" (p.103). This thesis argues that collaborative sound-scaping/walking and vernacular soundmapping, that take account of contemporary urban space by listening to it, can inform critical artistic practices by playing an important role in "subverting the dominant hegemony in this so-called 'agonistic' model of public space" (Mouffe, 2008). Sound(ing) art works promote new dialogues and creative listening experiences of (urban) soundscapes. They expedite collective ideas about soundscapes, inviting public participation and contribution, that empowers acoustic communities to engage with their acoustic environment and, as Ouzounian argues (2013a) to "recompose" their cities. The participative, collaborative and open-ended nature of these projects brings forward the social and political dimension of listening.

To this end, a convoluted set of practices is needed, which considers representations, values and power; and that through a sonic sensibility, articulates sound(ing) art's agonistic sonic agency; while simultaneously being mindful of criticism associated

¹⁵² This ecological approach benefits from an increased feminist engagement with Science and Technology Studies (STS) and the consideration of the entanglements of sociotechnical assemblages inside acoustic spaces, what has been termed as "ethico-onto-epistemology" (Barad, 2007).

with the production of public knowledge via crowdsourced initiatives. By engaging with the co-creation of such practices however, the tradition of the “songlines” (Chatwin, 1987), can indeed in some way be re-created and evolved today. This was a system for navigating and connecting to their land among Australian Aborigines, with every square meter of territory marked by unique verse and melody, which can now be translated into experimental soundmaps of urban space, by creating ‘music’ from its topography; initiating a discussion on how we use, experience, and represent the public domain, and indeed to what degree we can claim ownership over it. A critical sound art can also draw from practices of “dialogic editing”, cultivated by Steven Feld as a way to address issues of authoritative representation and power of control over the voice of his subjects (1987, p.191). Similarly, the term *āwāj* - used in many South Asian languages, and translated as noise, sound or voice, depending on context - is a productive concept, which according to Kunreuther (2018) we can use to understand political modernity, including citizenship, the state, the individual, the subject, the public sphere, human rights, civic notions and the like, in relation to sound’s political role.

From such a vantage point, sound art in public space requires us to rethink our relationship to the city; to embrace more progressive and experimental approaches to sound art, which perform all that has been so far neglected; from the interior and the domestic, to the ephemeral and invisible. This can be achieved by opening our ears to low-fidelity recordings, allowing for experimental approaches from noise and digital arts music, and by encouraging further reflection on the relationships between subjects, sounds, technologies and places. A further expansion of sound art practices can draw from the Situationist psycho-geographical tradition, which focuses on emotional connections to the represented soundscapes as a mode of experimental behavior (Debord, 1958). *Dérives* seen in this way, involve a collective playful-constructive behaviour and awareness; promoting a new way of inhabiting the city, through experience and emotions. This situated performative listening can further emphasize the intimacy of the relationship between city walkers and their surroundings, through movement, emotion and engagement with the uniqueness of places. Walking, sensing and listening to the city, opens the way to alternative mappings of experiences of space. This method relies on listening, looking, and

“sensing in the field” (Heuson, 2011), and mediates our experience through the microphone, the recording device, the camera, the computer, and so on.

If sound art is to be engaged with in this way then, it needs to be accountable with regard to whose interests it serves; requiring a critique of who, what and how it sonically represents. In this, acoustic communities produce acoustic spaces as products of interrelations; offering non-Euclidean imaginations of space, and thus disrupting this and other problematic accounts of space. Of course, “[i]t is impossible to zoom out to listen to the entirety of the sounds on the surface of the Earth” (Thulin, 2016), just as it is to represent the acoustic community as one entity. Rather, the development of a critical sound art advances a situated mode of listening, to produce a localized aural knowledge. Valuing individual interpretation of sound and seeing it as a building block of the acoustic space, thus enables a broader understanding of sound and its connection to those who live in it. Sound art can encourage us to invent forms of collaboration, based not on homogenization but on multiplicity; endorsing a politics of location, which is materialistic, translocal and relational, precisely because it grows out of difference rather than identity. This requires ‘a politics of engagement’; a method of affinity and kinship, preventing inclusive spaces like DIWO settings from becoming exclusive ones.

Ultimately, through the production of an experiential and shared acoustic space, it can clearly be argued that acoustic communities emerge; with issues of sociality, materiality and spatiality come to the fore, which as stated earlier, is partly because of increasing interdisciplinarity in the co-development of ideas and cultural politics between music, the creative arts and both the empirical and social sciences. Within this context, the task of generating an analysis of the world, can be said to produce dialogic engagement among listening publics, who themselves can engage with their environment; learning from it and from each other. Hence, a sound art that is critical, can approach and explore the diverse meaning of, and feelings that are related to, space. This form of situated listening as cartography, then sets in motion a collective co-authorship and a reclaiming of acoustic city spaces; providing a method that brings people together, which at can contribute to new forms of civic engagement, thus advancing a kind of citizenship that is active, playful and resounding.

In such a milieu, and in addition to speaking to or about power structures, acoustic communities are thus in many ways required to be reflective about their own power relationships. This entails a variety of possibilities, from attributing authorship accordingly, to disclosing what is absent from the acoustic space so as to avoid insinuation by omission, to considering its constrained role in society; finding a balance between the sometimes-proselytising intention of the work and the process of surrender to the fact that it will be individually interpreted by those who experience it. As such, sound art has the potential to influence the ways in which acoustic communities perform their 'listenings' in urban space.

Throughout this thesis, I have shown how sound and space engage in a creative dialogue that can potentially redefine and expand the understanding of the notion of an acoustic community as one formed in solidarity. Ultimately, in a variety of ways, and albeit with their own problems and limitations, sound art works are showing themselves to re/produce space, by developing participatory processes based on collective creativity. In highlighting the entanglement between sound and space, this thesis engaged with various sonic creative possibilities, which arise from the combination of musical and sonic research on the one hand, and research on spatial and social processes on the other. In the spirit of the soundmap/walk process, where conclusions always lead to fresh pathways and fresh interpretations, the research presented in this thesis inspires further initiatives in the exploration of the potential of sound, and particularly of urban sound, as a 'politicised' artistic act. The possibilities are as vast and endless as the journey of sound through space itself.

Appendix A | Interviews and discussions

Akoo-o Interviews

Akoo-o have been my basic informants during my PhD research. I have conducted extensive interviews with them. Below are the transcripts.

Interview with Nikos Boubaris, Akoo-o, 2/1/2017, Athens.

- Can you tell me about your group, Akoo-o?

First of all, this is something new. As Akoo-o, our practice has started in March or April 2015. This has been the result of certain procedures, that is the first was the *Fones* project that started in 2011 by Elpida Rikou, who is now running Twixt, and Panos Sklavenitis, who is a performer artist... So within this context, framed by Elpida, she wanted to engage in the discussion between anthropology and contemporary art, they have invited 10-11 people from different backgrounds to start working on the *Fones* project. From this, the results were some exhibitions, talks, performance lectures and now a book with the material gathered from these activities. This project was interdisciplinary, 10-11 people discuss and collaborate and also network. This project is now over but through this initiative I collaborated (again) with George – who I knew from when he was in Uni studying anthropology – so, we collaborated. At the same time, I met Sofia who had done an audiowalk for the Biennale and also Dana, through George – but we had also met at conferences. We just met there. Then, during the *Fones* project, there was this collaboration with Goethe. At *Fones*, since we were working with different people - Ksagoraris had brought Geert and *Escoitar* who were in Greece then – so there we were interested, I, George and Nina (artist) and we started a collaboration with them. Other people also participated, and the result was the (soundwalk/soundmap) at Goethe, i.e. this very big audio walk which was experimental both for *Escoitar* and for us. As you may know this project has been 'stretched' in many ways – in a technical way and as forms, etc. Nevertheless, it was nice, very maximalist, more than 700 audio files... It is still available if you like to do it and it is very interesting. So, this happened and at the same time *Fones* project was about to end but I continued to collaborate with George, Dana and Sofia and in one of our meetings we thought since we are already collaborating, and we are all interested

in this particular field let's organize it a bit. And this is how Akoo-o occurred. So, as Akoo-o we are almost one year old, officially; since the day we said that we will form this group with a specific name.

- Initially the name was Akoo-o collective. But then you decided to remove it?

Yes. I think the 'collective' was the result of the momentum without a discussion. We did a round of conversations where we had views from both sides and in the course of those discussions we abandoned it. You might have heard, and this is an inside joke, that Sofia organized a coup and took it out (laughs). My own personal opinion is that it didn't annoy me, but I prefer it without the 'collective' in the title because it carries a specific weight in the context of the history of art, of what is expected and also a political tone. As far as I am concerned, the things we do are political, but I want them to be differentiated by the ways that modern art in Greece is connected to specific political parties.

- You are talking about Greece?

Yes. Because there is a big identification and the limits are blurred. For example, in my artistic work, when I participate with my artistic contribution, I don't do it to express through existing (political) spaces and ideological directions. For this reason, I think that our last work, the audio walk we did at the archaeological museum, there are people, non-Greeks, that talk about the experience of the city, but it is just the stories, not this 'directed' thing about immigrants and political/ideological sympathy or empathy or supporting the weak. For this reason, we interviewed people from different backgrounds, such as bourgeois (β.π.), or from the West. For me it is obvious how the Other is experiencing life in Greece in a broader sense rather than reproducing e.g. what they usually do (he speaks about projects that only address immigrants and refugees?). Generally speaking, in Greece particularly – the term collective is also used by *Medea* (Electronique) or isn't it?

- I don't think so...

No, they don't use it. So as far as I am concerned I was okay with the word 'collective' gone for the reasons I mentioned. I believe that Akoo-o's interest, in relation to the

things we discussed earlier, is in the collective (in the sense of collaborative) practice. In order to be collaborative, you don't have to be a collective. Collaboration is about 4-5 people that have a relationship, which for me is very interesting, in the sense that we are 5 people but the way I understand it is that there is a trust, for me trust is really fundamental, in everyone's work and personality. This means that you are not obviously identify with the way that the other does or understands things, rather it works complimentary or it may work in parallel. For example, we have agreed that if someone is being active within this specific form or context, sound, media, mobility, walking, etc, we have agreed that one or two people can use the name (Akoo-o) without the others participating and possibly without having to agree (the others) – you know what I mean right? So, there is that, there is trust, collaboration and flexibility. To give you an example, when Dana and George went to Belgium, and also other smaller things we done so far, they have used the name. Let's say if tomorrow I do something with Sofia, or on my own and I say that I want to use the Akoo-o name, it will work. Even when we do things altogether it is really interesting that there is complementarity and collaboration from practicalities to more formalistic and expressive approaches, which for me is connected, because we are in this phase of where we understand that two work better than one. We have moved passed the phase of the Artist with a capital A, so there are more aspects in that. Also, at least for me it works better in the practical sense because we are all and especially I really busy and we can arrange it so that someone works more and someone else less, which is helpful. There is the plane of, a kind of a collective ethos so to say, which however is different from the official discourse on the collective. On the other hand, we are open to collaborations with various people. So, it depends on what everyone is doing, or how they are working, we could collaborate with you or with anyone, e.g. Akoo-o and Katerina. What I mean is that there is a collaborative and collective ethos where you feel that we are all part of a group and on the other hand, because it is how our era is, there is space for individuality, you don't have to comply, you are more or less complying to a context rather than directions. So, there is no need to bring it out (the collective), it may cause more misunderstandings rather than... What I want to say is that I didn't react when Sofia organized the coup and removed it.

- How do you work together? What is the procedure?

So, we have on the one hand the workshops which are very important. They are important for us, the thing we did during *Hybrid City*, since we are a new group, it is good to work altogether. On the other hand, workshops are good because they are an opportunity to re-vitalize and energize from others (participants). The people that participate are collaborators, there isn't this power relationship between the teacher and the student, you understand them as collaborators. And I think that this thing, in *Hybrid City* has worked really well. And even though it has been 2 or 3 long days with many hours, the result was really good and expressive and sweet so to say. So, for us workshops are a learning experience for us too, as a collaborative practice with others that might become our collaborators in the future and also as a material or techniques that they can use in the future. In the sense of a technology or technique. As you know we are using *noTours* but there is a discussion whether we are going to use it or not in the future. We are more of beta testers, or users, we are not software engineers. So, what we do is take the available platforms and work with them. So, in a sense, the workshop is a work. A work that consists of all those elements we discussed about, we produce a work, it is collaborative, it has some performative elements, etc. so the workshop is a form of work. Now, about the other actions, you can say that we are kind of burdocks, leeches, but not parasites, that attach to, you know, we move into certain circles and serendipitously, depending on where we think we may contribute. There is no specific time-frame or chart that we have to follow, we don't have a plan for the next two years so to say, we are here, we keep our ears open and depending on what's on and if we are interested in it we do it. So, this is how we 'enter' or participate in various things. The way we work I have already kind of described, there are works that some might work more or less. *Istories Katoikisis* was a project that we all contributed equally. So initially we had to think, ok what do we want to do, so the original idea was that we would do an audio walk, but we had to discuss the ideas of space, context, the route, all those things, i.e. how space is connected to the stories that exist within it, how does it interact, how it is perceived somatically (embodiment), oral histories, etc. So, we were meeting and discussing the various ideas (patisation, other roads, etc.) which was of course related to the actual space of the work (the Italian institute), so it had to be 'installed' somewhere near. But this is the interesting part, because you know, you don't go to do something prefabricated, it's not like a commissioned work, it rather is the interaction with the space. So, after

having considered other spaces too, like exarhia, patisiwn, hafteia, etc., at some point we had the idea to do it in the garden of the archaeological museum, both for practical reasons, because it has a good gps reception and also because it is by itself a space that invites you to relate and converse with this space. . So, from our discussions we came up with a more conceptual idea, i.e. not an audio walk with location specific information, rather than a symbolic space, you know, the garden which is designed with western Europe standards and also a symbolic signification because it is outside the archaeological museum which is a formal cultural organization which has participated in the creation of the national discourse; so it was conceptual in the sense of how you can place a different space constructed by all those people (interviewees) and through gps and the audio walk, i.e. to produce an over-layering so that was our direction. So, for the practicalities, we searched for people who would be willing to talk, mostly George and Dana, we did 7 or 8 interviews because there was this issue with the limited time. So, they did the interviews, they sent them to me, I edited them, sent them back, discussed about it again, and so on. After we finished with this part we started to do the mapping of space, e.g. based on certain themes, George, Dana and Sofia worked more with the *noTours* editor, I did more of the editing, so that is how it went, how we divided the labour.

- And which was the part where you all worked together?

It was the original discussion and also when we were listening to the edited extracts of the narrations where we were listening to those again and again and decided on which we would use. We had, let's say 40 minutes of material so we all listened together, and we decided how to form them in unities or circles. Listening to the sounds and sound mapping was collective. Then it was again emails, skype, wetransfer, etc.

- How do you understand this notion of augmented aurality?

For this again you can understand it in two layers. The first one is about experiencing a space and listening to sounds that you wouldn't normally hear. That is an augmentation of perceiving. The second layer, which derives from the first, is the emergence of an augmented – through movement, body, space, storytelling – an

augmented subjectification of the relationship with space. That is for me, the two layers, a mediated experience which is the soundwalk, technologically mediated that is. Well, you can't say, it is not exactly that, you know layer is a term that computer users use, so I would describe it as more actions tangled together...

- What about works that don't use technological mediation?

Technically speaking there isn't such thing as unmediated work; there are rather various levels of mediation. For example, with us two now, since I am not inside your head, the oral speech is the mediator, or the bodily sensations, they help us communicate and mediate experiences. As you already know, the soundwalk, we could understand it in Wagner's terminology of the total work of art, in a way, it is just a parallelism, you can use multiple media in order to be more expressive, in a walk you can do many things; you can just walk and listen, also interact with your environment and see how this affects your listening, or it can be performative, it is by its nature a performative way of walking, but even more performative in a more conscious way, you can interact with technology in various different levels. The walk is a way, a way to create an environment. Thus, depending on the type of movement you can interact with sensors that produce sounds, or with headphones, or... so you can use different things on the walk, what is usually the case is that these kinds of practices are detached, someone does this, another person does that, etc. What is interesting is if you could combine everything by using the soundwalk as a platform. So, there is this mediation. Practically this is not mediation; what is important is the interaction with the environment with a focus on the acoustic experience which is also multisensorial because at the same time you are able to see, move, etc. But with the focus on sound. So, for me it's the interaction that matters.

- Interacting with the environment. What about interaction between participants? Because it is kind of lonesome practice. How can you expand the interaction to occur between people? How can you achieve the collective listening experience?

You are right. When we did the video walks in Mytilini, I had noticed that people really like to do it with someone else. Therefore, what I did was to use splitters on the headphones and people were doing it in couples. They shared a screen but each one

had their own headphones. And it worked really well because they could speak and comment while doing the videowalk, so from experience I can say that people want to share that experience. So, I don't know how we are going to approach it but I think it is a matter of convention and principle. That is, for every action that you pursue you have to follow a convention and a principle; it applies when you are looking at a painting, or when you go to the theatre. Same with an installation, you know that you walk inside the space of the installation. So, every audio walk has its own convention. So, what is important is the frame, the context. This is something we need to think about... I don't know... But it is interesting, this combination between the individual and the collective. When we go outside and walk together, when performing group soundwalks, this beautiful combination is always present, the fact that we are in the same space and listen to the sound, but everyone can listen to different things, different textures, or even if we all hear the same thing we process it in a different way. But yes, this is very important, and we haven't looked into it. In the meantime, in this whole history and philosophy of walking the dominant figure is the lonesome walker, the flâneur, and it is also reproduced... I remember a work I had experienced back in 2004 in France, and I imagine that there must be done many similar things after that, there was a space and you could go inside it and leave a message and then someone else can go with headphones and listen to it, so there is a kind of collaborative listening practice. I assume that another level is to do it together, together with others. We need to discuss about that, it demands a certain planning.

- What can you tell me about the sounds that you use? How do you choose them or edit them?

Personally, and as a member of Akoo-o, you know, I used to be against the sound of speech, of narrations, but now I think is very difficult to avoid it. In my own practice, it is very often present, especially in the soundwalks, the speech is very present. This is again connected with the issue of oral history and narratives which is very big, very important, this dialogue between ethnography and contemporary art. You can collect information from different angles or viewpoints, from different people, i.e. if you have narratives from different people they provide a multiplicity, which is part of our era. On the other hand, the majority of audio walks, by the way have you seen this *Still*

London Burning, it happens at the City I think, and it has to do with pollution, but with original music, it a kind of an opera, I will send you the link for that...

- Is it site-specific?

Yes, you have to go there. But you can also download the mp3s and listen to them from your home. It has also a map. From what I have been following, the voice is very dominant. Perhaps it is because we are talking about strolls or walks with friends or acquaintances or you know, guided tours, in the logic of the audio guide. But, on top of that, voice is a very central sound and it also plays a crucial role in the whole storytelling, or perhaps because it is a human sound and we feel like it is something familiar, in an acousmatic sense at least to listen to someone's voice. Apart from that, the other sounds are mostly environmental sounds that we use. Personally, even though my academic practice isn't related with ethnography either, all my artistic practices have an ethnographic approach. But from a research point of view I am all about theory. No interviews or participant observation, just reflection. But in the case of my artistic practice I pursue this communicative aspect... But yes, the voice and the narration is very central, perhaps because of what we discussed. Apart from that, very important are the environmental elements and how you use them; recording ambiance, but also how you interact with the environment, like what Dana and George did in Belgium, where they considered the morphology of the ground, e.g. the tiles on the paved road and interact with that. For me, this is very important because these elements provide a 'rhythmology' which is very central in the actual perception of space as well as in the experience of the act of walking. Such elements can be assistive to the experience. Another category of sounds is consisted of the sounds you produce through your experience with your environment. It is just not about recording certain sounds. But yes, from what I observe in my practice I use voice a lot.

- Is there a certain artistic or expressive goal for you that you aim to achieve through this collaboration, being part of Akoo-o?

As you know I am part of this sound field. You need 15 lives to explore it all.

- When you say filed, you mean sound studies? Do you place your self within the sound studies field?

Yes. Or, some years ago I would say yes. Now, it is this blend with digital media, with design and so on. As you know, sound studies is a scientific umbrella that encompasses all of them, sort of. But yes, media, that sort of thing. It is this very big space that you have to investigate. One way to investigate is through Akoo-o and producing works. But we will not just do audio walks, but also sonic compositions, installations, etc., with the emphasis upon the sonic-listening experience, on space, movement and media. This is the space to investigate and Akoo-o is a project of the moment, it is unfolded based on the dynamics that emerge through certain conjunctures. Perhaps Akoo-o will be out there producing for ever or we could stop working next year. For me Akoo-o is very important both personally because we form an expressive space outside academia, beyond bureaucracy, it is very vibrant, flexible and mobile, more practical, because as you already know, there is a limit with what you can do within universities. The other important thing with Akoo-o is that there is a bond between us, I value them as people and we decided that we would be Akoo-o after we knew each other artistically too. But as I mentioned I don't know how long it will last. Because Akoo-o is not our only occupation, for none of us, so I don't know how this will carry on, depending on each one's personal goals, but you know it also feeds our own interests, so there is a connection in multiple levels.

- How do you conceive interdisciplinarity and collaboration within the University? Or is it something that is more successful outside academia?

As organizational form our Akoo-o collaboration has nothing to do with what we have to deal within the University. But this individual practice is getting feedback from what happens in the university, it borrows to and from, e.g. with our collaboration with you at the University of Edinburgh, so yes, it is interrelated in various ways. As we know today, ontologies are relational. It is the relation itself that creates the ontology rather than the basic properties, so I believe that this is an obvious example of that case of relational ontology that is connected to various things but at the same time it is differentiated; where differentiation is not conceived as an opposition or antithesis. That is, knowledge today is produced from official institutions such as the university but also from unofficial ones. But as you know, at least in Greece, such institutions are still a reference point, they still hold the power, they have the authority. So yes, you are inside and outside at the same time. There are distinct lines.

And we would be interested in writing a paper, go to a conference and present our work. Personally, I have been active and an academic since the 90s, when I began my academic career I was all about text, theory, social sciences, communication, media, etc. So when I started to study sound I said this is bullshit, you can't do sound in theory, you have to make sound, and this raises certain issues, what is this thing that you are creating. But you know, now, with the development of contemporary art you don't have that problem anymore (laughs). So, yes you are connecting with whatever fertile ground you might find in order to revitalize, it's an organic way of developing. With Akoo-o you have this flexibility, to be inside and outside at the same time. We don't have our own way – we haven't done an exhibition as Akoo-o (two months later they organized the exhibition at Metamatic) we are always invited as part of something else. But this also affords a flexibility.

- Can you have the same degree of flexibility within the University?

Yes, this is the case with formal institutions, like the university or the galleries, museums.

- Thank you. Is there anything else that you would like to add?

You are welcome. Well, in a macro level, especially in Greece, this has been an opportunity to collaborate with others without having to deal with this predominant 'I'. It is a constant course for investigation which is at the same time connected and disconnected, it is complementary. Collaboration is a core issue but there is also the risk of fetishization. It is a forum where everyone is allowed to undertake individual initiative outside but also collective inside. To be honest, at the beginning I was very reserved in terms of collaborations or opening up to other people. I felt like if we opened up to other people they should be in tune with what we do, otherwise we talk about connection or same-centred circles, not in the sense of a power centre in the middle, rather than that of common interest. At *Fones*, which was kind of an ancestor to our project, we were 11-12 people and with these numbers collaborations are more difficult. Our current dynamics, 4-5 people is a good number. Also, if any of use wants to do a work, an audio walk as George, as Nikos, as Dana, they can do it. It's not like it used to be like with bands that I someone wanted to do a solo work the band fell apart.

This is also interesting, to compare with how such collectives functioned. The frame there was narrower, more rigid. I have very vivid memories of how members of bands were ostracized because they wanted to differentiate, from well-known bands to less well known. But bear in mind that this is a very young project, we are just at the beginning, we count less than one year. We will see how it goes... For me there was an issue with Geert, because we hadn't even started our practice and we were supposed to do all those projects, so I said that we should be more eclectic, we can't do everything because the level of the work that you will produce will be mediocre. Yes, this was one of the issues we had to face from the beginning, because Geert, as you know is helping with the whole visibility and networking. But on the other hand, we are being overwhelmed with all these actions, so yes there was an issue there, and we all agreed that we needed to slow down our rhythms. However, there were some other collaborations but to be honest I am very cautious with those things, you have got to have an intuition in terms of deciding on the possible collaborations. And here is again the fetishization of collaboration. It is now a thing. Collaboration is good, so we all need to collaborate. But this can also be a waste of time. You need a sense of direction in terms of collaboration.

- How do you work together? What is the procedure?

So, we have a certain subject, or there is a certain event happening, we are offered a theme, or we suggest a theme, we discuss altogether about what we want to do, how we approach it. Now I am focusing on *Invisible Cities* because I liked the way we worked on it particularly. So, we met a few times, we knew where it was going to take place, we knew the subject therefore we decided to offer something of our own there. We met many times and discussed intensively, or less intensively, with agreements and disagreements on how the final result might be. Everybody was bringing their own idea, but the main idea was Nikos', we started from there, this is usually how it happens, someone throws an idea, then someone else responds and we are building on it and the final result might have nothing to do with the original, or very much related to it. For the particular work we met, we discussed we visited the space, we decided... the main disagreement was if we would relate the work with the space or not directly or indirectly and finally we started, everyone on his/her own, to look for people to conduct interviews because we were looking for specific people. We conducted some interviews, then we did the editing of the audio, everybody worked on their own interviews, and then we met in the field in order to decide the walking trajectories, decide about the times, see what goes with what, we decided what abstracts we would use. You know, we went in the field, we tried out some things and then back to make them, etc. And in the end, we present it altogether. Something like that. The essential practice is that we discuss a lot about it and we try various things and then re-try.

- Is this what you do in all your works?

Yes, pretty much. For example, for the work we did for Goethe Institut, the way we worked was very independent. We didn't collaborate that much.

- You were not the Akoo-o back then?

We were not Akoo-o but we knew and liked each other and collaborated. But yes, we did this as independent artists and the context was entirely different. But even then, for *Ithaki*, the piece that we presented in Goethe, the discussion was done collectively,

and for the work everyone independently contributed with the sonic material, you know recordings, compositions, ideas. The main composition was Dana's based on our conversations. So, the work can be done more unequally based on everyone's availability, interests and skills. But the basis is that we discuss a lot on how we want the work to be formed.

- Do you have specific roles, depending on everyone's skills, interests, etc.?

Everyone has their individual interests that inform our work, however both in workshops and in works, I think that everyone contributes with their part, I don't think that there is unequal contribution.

- I meant, is someone more specialized in a specific area?

Well no, we all do everything. The visual element is almost non-existent, we have done some very bad graphic attempts for pamphlets that we had produced in the past, but we are not interested in it right now, perhaps in the future we will be interested. Definitely Dana and George are more involved with sound however, both Nikos and I are doing sound editing and field recordings, so I don't think that anyone is more specialized in something.

- And what about workshops?

Again, the procedure is very collaborative in the workshops too. We discuss whether we want to achieve something specific for the workshop, because every workshop is different, there is a basic structure that we use in every workshop and everyone has to present a specific part, which s/he prepares on their own, but even in this case, during the presentation of the theory to the participants, when let's say I am presenting my part, Nikos can say something relevant and the talk can be diverted towards another direction, I mean that we let it flow we are not very strict about it.

- How do you work with the participants?

Well, the first thing that we do is an introduction. Who we are, why we are collaborating, how long we have been collaborating, where everybody comes from, and everybody talks in his/her presentation about the things they are mostly interested or are closer to their field. First there is the discussion and then we go out

in the field, instruct participants on how to use recording devices, we discuss about the ways of listening and recording, etc. We have tried different approaches for that: one way is to be with them all the time in order to help them with anything they might need, and we record together. Personally, I don't like this approach very much. The other approach is to tell them to take the recording device and walk on your own, record, etc. For example, we do the listening collectively, but for the recording, I personally prefer that will be done separately. I think the others too, but we haven't discussed this, but I think that this works better. So, after that we go back to the lab, we listen to the recordings, we listen to the recordings all together if there is enough time, otherwise everybody listens to only their recordings. After that we tell them the basics of sound editing, we do this addressing to everyone at the same time, we have tried to do it independently but due to technological equipment constraints, due to the fact that there are only 4 of us and the participants are more, this doesn't work. It works better if everyone has their laptop and one of us (Akoo-o) is giving instructions. Finally, we discuss how these sounds are going to be related to a specific place, it is a *noTours* workshop, we discuss about geo-location, and if we have the time we go out and listen to it!

- So, you mainly use *noTours* in your workshops. Have you done any other workshops without *noTours*?

No. But we are doing now a semester course in Twixt lab where *noTours* is a very small part.

- As Akoo-o and as Sophia, what is your goal, your artistic goal, when preparing a work? What is your interest in relation to sound?

I think that, well I can speak only about me and not as a representative of the group, because we all come from different fields, we have different interests... So, the basic common goals are, perhaps we have different goals for every work, so I cannot give you a general goal... I could give you the trivialities, such as the importance of sound and giving sound the proper share of attention, because sound is a medium that people are not very familiar with. You can get very interesting reactions from people when you tell them that, guys, you know, now we just listen, I like it very much when that happens... We are also interested on how a place exists, its importance and how

this importance is exploited. We are interested in what happens when art goes out to the public space. There are many questions regarding this. Everyone likes sound for their own reasons, so this fascinates us and... Well perhaps Geert, who is a curator would say different things, like it is important to bring forward the collaborative part, or to do things in collaboration with the local people, for me these things are not that important, I am mostly interested in the role of art in public space, to experiment with the boundaries of creation, what you can and cannot do, I am interested in the touristic dimension, in my own personal work tourism plays a great part, my approach to it is mainly ironic, not all the time though, so I am mostly interested in these themes, how you do art in public space, who does it, etc. I am also interested in documentary and I think that *noTours* gives you this opportunity, to create a kind of documentary, without recording images, an alternative documentary style, which brings you face to face with things that happen in the city and it is not always pleasant to come face to face with those things, so I am interested in this type of experimentation.

- What about walking?

I am interested in walking, not so much from an experimental viewpoint, and also not from the Situationist/flâneur perspective. Perhaps, *noTours* has a Situationist dimension since it reverses touristic guides and transforms them into something different, I am interested in this. Mostly, I understand walking as a tool to investigate. You see, I like to walk a lot on my own for various reasons, for meditation, or just because I like it, or even because I am a flâneur too, but I am not interested in implementing it in my artistic production. I like walking because it brings you face to face with the things happening around you, a way to be present in public space, instead for the practice of walking itself. You are outside, you come up against other people, things are happening around you, things that you cannot have it figured out in advance or to have them pre-planned... It is a medium for investigation, it definitely has this dimension.

- Would you employ a different practice if you were making a no-walking piece, a sitting piece...

In our works we don't have individual points of interest. There are in-between situations. There is a composition that resides in space, so walking takes you from one place to another, and in-between things happen. We have done works that you don't need to, for example the work that we did in the gardens, you have to walk to listen to the next sound, an important part of walking is that using *noTours* you can relate a specific place with a specific sound, so it gives you the opportunity to do lots of site-specific things where something is following up something other, but, in the work in the gardens, you could sit for a long time on a bench and the act of walking was not very important in this work it was only the way to access the next sound. For me walking is not that important, perhaps I haven't found yet something that is of interest to me in relation to walking. I mainly adopt a critical view towards it: why does it happen, how do you walk, and also as a compositional tool.

- What is the role of sound? How do you use it?

Well, I think it basically depends on the project. You might find an interesting environmental sound that you can use as background sound, a kind of a sonic carpet because there is a part of the work which doesn't function without a background sound – well on some occasions you don't want that, e.g. you want a very staccato sound that will startle the listener like a punch in the face. But most of the times you need a background sound that will facilitate movement from one space to another. So, first we are searching for these sounds in almost all projects. Beyond that, it depends on each project; it determines what you listen and what you seek to listen. So, I can't give you specific sounds.

- Are you interested anyhow in specific sounds? Do you seek them?

Hmmm, I think, no. No, no. I like the human voice, I am interested in – I had done a sound work with sounds from Athens, Istanbul and Barcelona and what I was looking for was how people speak in those three countries, how the soundscape affects the volume of the voice, the way they speak, how much they speak, so, I would say I am mostly interested in the voice. I am mostly interested in the context rather than the quality or aesthetic of sound.

- And what about soundmaps?

I am interested in using maps as a tool of knowledge, power, etc. Also, how do you draw borders, what borders mean, I am interested in things more widely, not only through the notion of sound and through the Akoo-o team. Furthermore, there are many options, online, of maps of different places. Soundmaps, for me as a listener, are a way to learn more about the space I am listening to. I go to the soundmap of let's say Chicago and I listen to the sounds of Chicago and I like that. On the other hand, soundmaps have another dimension besides the documentation of the soundscape, besides the historical interest it has also an anthropological interest. What someone chooses to document from a city; how do they document it; what is actually out there to document. I am interested in these things very much. Also, google maps is a very interesting tool which combines various uses, eg it is all about this dominant look from above, it is owned by a company that has its own agenda. On the other hand, it is interesting how you can use it subjectively, how you can create your own layers, your own maps, and not only google maps, there are many other mapping tools that are more free, more alternative, so there is the possibility for anyone who is willing to learn how to use them and has access to them, to create, to introduce a riposte, a response that comes through a dominant medium, which is very interesting too. What kind of riposte is that and how much of a riposte it is, since it is hosted and afforded by a dominant medium, the fact that it is hosted by a dominant medium, but it acts as a riposte, you know, all this stuff are interesting in relation to maps and online maps in particular. And also, the fact that with online maps you have access to a larger audience.

- How have you, Akoo-o used maps?

Mostly as a tool for storing sounds. A sound storage space! For the project at Taf (Monastiraki), we had the map of Europe and participants from various countries were sending us their recordings and we put them on the map. For us, it was mostly organisational, at least for me it was. It was a visualisation of the sonic material; which is what maps are used for too. A way to visualize data. Moreover, before we were formed as Akoo-o we participated in the creation of a sound map of Athens, and its role was similar. A map that visualized the dispersity of the sounds of Athens.

- Let's move to the Akoo-o collective.

Well I don't know what the others told you, but we are no longer Akoo-o collective, just Akoo-o. With my initiative and persistence. Look, collective is a term that has been use very much, too much. Especially in Greece, after 2008, there have been many collectives that do various things, are part of enallaktikos.gr, and other similar sites, etc. Some collectives are very active, doing very interesting, very nice things, other collectives don't do very interesting and very nice things. Nevertheless, everyone calls themselves a collective. You know, this word has a very political infused history, so, I think that, even though we are a team with coequal relations, even though we discuss and agree about the final result, even though we do work altogether, I think that there is no reason to have the word collective in our name. Let's just be Akoo-o.

- How do you handle disagreement?

Our goal is the final result to be the result of everyone's contribution. When someone disagrees is always being heard, we always take different opinions into consideration. And the final result, is as I told you the product of agreements and disagreements. It has also to do with how much someone will support this alternative opinion, how much the others are willing to draw back. And generally, there is this interaction, this respect and willingness to draw back from everyone. Yes, there is respect.

- Okay, and I will mention again the word collective, but not as a political term rather than as a collective experience. What is your experience of collective listening?

There are works where we work alone and others that we work collectively. When we work collectively I enjoy it very much because we gather together at someone's home, we are brainstorming, we have one laptop and we listen altogether. It may take a lot of time, we may consume more food, alcohol and tobacco (laughs), but it is very creative. Because we are so different, cultural studies, art, anthropology, musicology; everyone brings something different. Therefore, I enjoy this collective part a lot. As far as our audience is concerned, there is a part which is done collectively, we go out and walk altogether and listen together, and there are some other parts that are more individually. If this is a *noTours* work you have your earphones and you experience it on your own. Its form, the fact that you have two earphones and a mobile phone, it is made to be experienced by one person. So, I prefer to give them the headphones and

not walk with them. Well, this is it, I don't know about the collective listening... I don't think it is very innovative, it is for me more of an exercise, it is very interesting to discuss this experience, in the context of a workshop, because everyone is listening to different things, everyone brings different things. And it is very interesting because the public is not very accustomed with the idea of just listening; it is the first time for the most of them that they are involved in the process of active listening. During the walk, at the beginning they are talking to each other, make fun, they are wondering about the purpose, "are we going to walk and not speak, like mutes?" and eventually they enter this mode of listening, they follow us, they stop talking gradually and when we go back to the lab they are very enthusiastic about this experience and talk about it like it is something extraordinary, "wow, what did just happen", etc, because everyone listens to different things and it is really interesting. I like it.

- I imagine that this is very prominent during the workshop, during the phase in the lab where you edit and geolocate sounds.

Yes, it is.

- And how about the immersion, the feeling of immersion in the work? What is augmented aurality and how do you achieve it?

Having worked a lot with *noTours*, I understand augmented aurality mostly as a way to add sonic layers on an environment that has its own sound. It is like adding meaning, or like commenting on something from the already existing soundscape, like pointing towards a sound, this is what you need to listen to. And at the same time there is also the sound of the environment. Someone can, I do it a lot, someone can walk with the earphone in one ear and with the other ear free to listen to the environmental sounds, but if you do that, you are missing out on this immersion to augmented aurality. For me, augmentation is about adding meaning.

- Thank you!

You are welcome.

The same night the interview took place, Sofia, who has mentioned to me that she prefers to express herself through writing sent me some supplementary comments on specific issues. These were:

1. collective: It is certain that every way you choose for doing things is political, but in my opinion, in our case the fact that we work together is not a (central political) statement. The reason we are working together is because we come from different scientific fields that the one compliments the other in practice (technical issues) as well as in theory. The discussions and the works that derive from them is what brings us together and not a self-organisation mood, a mood for opposition against contemporary social/political, artistic systems, etc. Of course, these [social/political, artistic systems] are things that we follow and are interested in, but our group was not so aimed.

2. when I listened to the interview I noticed that “listening without seeing anything” means that there is not a visual artistic material object (many people tell us why you don’t give a map, why does the work have only sound, perhaps you should use some images, etc.). Of course, they see something, they see the space the work is installed, they are not blind walks and the connection of certain sounds with a certain space is very important for us. It is what it is all about.

3. When we are doing workshops very interesting things come up from people who are not familiar in working with sound and are strangers to us. In the workshop we organised for the hybrid city conference, very strong links have emerged that we hadn’t anticipated. The workshop motivated the participants and also us towards alternative paths and also it can be the starting point for new collaborations. Furthermore, the workshop creates a field for debate and reflection, through which we raise issues that we not always given the opportunity to debate in a project: how/where do we walk, what does art in public space mean/is it art that produces the public sphere, what is the role of institutions in these kinds of works, how acoustic ecology (which is what draws people in the beginning) has a conservative approach and how can you do something starting from there [the acoustic ecology], adopting a critical stance, how you can think critically about the work you produce, how you can

produce something interesting beyond the aesthetic result, which for me is not the case.

4. Walking: I am interested in walking not so much in a spiritual sense (sic), rather as a medium for knowing an area, and (consequently) as a medium for brining to the fore the power relations: What does walking as participant in a walking work of art means, who organises it, who sees it, who is the viewed object and what this relationship means in a social, political, even psychological plane. I want to mention here that the person who walks with the headphones is not only listening/walking/seeing, but also invades in an area and becomes a viewed object too, let alone when this occurs in groups. This creates a sort of relationship that questions and touches upon power issues and perhaps raises various questions and reflections to the participant. Walking has been characterised as “simple”, “natural”, but I believe that it is not simple and natural at all. There are so many things going on relationally when you walk somewhere and works that involve walking have the opportunity to raise those issues (this is what I mean when I tell you in the interview that I see walking critically). Everybody in the group has a different approach to walking and this is very interesting for me.

5. works: we have done *noTours* works, soundwalk with mp3 players, sound maps, sound works without walking and we are thinking about doing works without technical mediation.

Interview with George Samantas, Akoo-o, 8/11/2015, Ghent.

- Can you please describe to me the procedure that you follow?

Every project is different, each project has its own context, we do different things in a workshop context and we follow a different procedure in the context of creating a work. Our first contact, which was also our first contact with soundwalks was the work that we did for Goethe institute and it is very interesting, so the first thing to do is to discuss about the context, what exactly, where, you know, what is this thing about? What is the working title? Where are we doing it? Where are we, in connection to site specificity. After this, you begin to think what kinds of stories can be played through sound in the particular setting. I am more interested in sound than walking, I am into walking, as a research tool, but I mostly think about and work with sound. So, methodologically, at the beginning, we walk, see the setting, perhaps decide the trajectory, in case it is not defined, or the area which we want to invest sonically, or augment sonically (laughs) and at first to build a profile of the city through its sounds, what are the sonic marks, what is the ambiance, what happens during the day, as time goes by, what are the dynamics, because soundscape is very dynamic, and also by observing what people do, what are the uses of the space, is it about residential or transitional use, what exactly happens, to observe what happens through the eye of the observer. However, since also as an observer you can intervene in space, and this is what both anthropology and sound studies teach us, gradually we observe how our own experience of this space is transformed, and finally think about our narrative course. Because, if you follow a certain route this means that there is a kind of history interlaced through space and how this history can become a part, be embedded, how this can be audio-driven. Also, speaking about a general augmentation, without a specific narrative course, the sounds that we want to bring forward, sounds that we want to edit, what kind of feeling we want to evoke in a certain space, in a certain environment.

- What is augmented aurality and how do you achieve it?

How you do achieve it? I don't know... Look, my understanding for it is that it is an environment within an environment. Like a hybrid space between reality - which is

what happens out there - and a second layer, which is our own interpretation of space with acoustic terms.

- Your interpretation is the actual augmentation?

No, it is not augmentation per se. Our interpretation is based on this effect, on the effect that makes you feel that you are in a space and that there is a second space which is a space aurally augmented. This, as a vehicle for artistic expression, we are managing it in relation to the space; both how you do it and what you want to say with it, the very basic give is that the user/walker has one device at hand and another one at his ears. For me, what is needed is, depending of course on what you want to say, these two things have to communicate, it is a matter of technology too, the headphones to be 'open', simply, the blending of the natural soundscape with the augmented one. And there is a part, in the relationship between those two, that for me, is the part where fantasy is grounded, our fantasy and the listeners' fantasy. It is not a space that can be heard independently, cut off from the original soundscape, this may cause problems such as for example we think that someone will walk during the night when it is quiet and they listen to it during day and it is almost inaudible. Well, super, this is what it is, every time you are negotiating space, sometimes the unmediated soundscape may be so overwhelming that, we lost, what can we do? It's not audible... or it is a whisper compared to what is happening in the environment, it is a part of the experience. Anyway, when we go out in the field the first thing that we do is to record the sounds that are heard.

- What is your goal in relation to your artistic practice?

For me, especially for the Goethe project, since we started discussing about it, I was not participating as artist, rather than as an anthropologist and I was trying to use the sonic element with analytical terms, which for me means that, this second layer for me, you see in this (Goethe project) we were not Akoo-o but individual artists, I had a part, together with 3 more people who were the basis for the collaboration with *Escoitar*, the *Fones* team. With Fones, our agenda was exactly that: artists and social scientists work together, searching for the common ground for expression between these two disciplines with the voice as the mainstay. Now, this specific work, for me

at the beginning I was fascinated by the enchantment caused by technology, like, wow, this machine does this thing, has this function, and how nice it would be to use it for this purpose. So, I went out in the field, recording sounds and thinking how to use them, etc., so I got involved with a very typical, an older sense of artistic approach, and the metaphysics of absence. So, I used riot sounds at a space where normally there are riots. And I thought, wow, someone will go out there and it will be a random day and they will listen to riot sounds. Yes, but this doesn't mean anything, in reality. If you want to listen to riot sounds go to a riot. It is not a big deal. On the other hand, and it was fun because I started to think beyond this, what I want to achieve, why I am interested in the riot on this specific place? Which, in negotiation with one another, and the fact that I was focusing on voice, caused some analytical thoughts to come out, I have written about it, that I don't know if these thoughts are communicated to the persons who listened to it, I am talking about polyrhythmic, symphony, dissonance, harmony, disharmony, the common step, you know, tensions, flows, alternative... which is totally site specific because it happens on site, you know, later I started thinking about it in more artistic terms. Another part of this project (Goethe) was what we did with constituencies in public space, how are we addressing matters and how voice is the carrier for and means of synapses and performance of social relations.

- And what is your trajectory from *Einander zu Hören* to the soundwalk for the Dare Conference?

I still consider myself as an anthropologist, rather, a media anthropologist. And you know, what matters in sound, as an anthropologist who studies sound, are all those mediations, the act of hearing in itself with headphones which has been an interest for anthropologists of sound since a long time, since the 80s, the Walkman effect, etc., but after that, when you are doing research in sound studies, all those effects, all those schizophonias, the acousmatic experience, all those things have social effects, they produce different social relations, so, digging deeper into the technical part of the production of a work, more issues come up that are of interest to an anthropologist.

- What is your relation to walking?

Walking was an important part at the work we did for the invisible cities project. It was also important in *Einander* but there, at least for me, it was more about the monumentality of space, especially the part about the riots, the other part was more about the use of space, so I could say that it is more anthropological, the part about the constituencies. But walking as practice, then, was not very important for me, it was the tool, the vehicle with which you can hear the work. It was about space, space as architectural element, not as the walker's experience... Walking as a way to experience space, go out, walk, a vehicle that gives the opportunity to speak about space other than text. Because there are certain things that you cannot do with the text, such as getting someone out there to experience public space, or you can? ... And there is also an issue regarding public space when you are wearing headphones, because you know, it is a hybrid. So, walking at *Einander*, was not our first priority... In *Invisible Cities*, the monumental element was not present, or slightly present. We had the monumental element because we were doing the work close to the archaeological museum, there was an exhibition about travellers, but the soundwalk was composed based on questions like, where you start, toward where you will go, when someone walks what will they think and wonder, when he is immersed deeper into the work we wanted him to listen to more 'deep' stories, when he asserts, like climbing stairs, we wanted him to listen to stories that speak from somewhere high, that have such a perspective, so in this work space was more important. In the sense that we were concerned with the architectural form, e.g. there was a French garden, a garden which is made for promenade, so there, the way we edited, the rhythm of the narrations, because we wanted to have a walking tempo which would be more 'wandering', rather than travelling from A to B and listen to something, so there, walking had an important role.

- How do you work with sound?

Look, you go out, you walk, you observe what people do, you see what is important for the eye, or for the ear, and you start focusing on those things. Here, for example stone is very important water is very important, and trams are very important, which are characteristic to the city, and also bikes that are too many. However, there is a part here that deals with public space, and its uses, and the work. So, because you are outside, and because you are creating a work that is meant to be heard outside while

walking, we are interested in things that are moving in space. And I think that, but I don't know what Dana is doing exactly, but it wouldn't have the same effect if in a walking work I came across a fascinating sound of a fountain and used that from the beginning to the end, just because it sounds nice. This would not be a walking work, rather than a sitting work, a new age style work with fountains and waterfalls and, you know, an entirely different thing. So it is interesting for the work itself to involve movement and movement in different spaces. Obviously there is a different acoustic between different spaces, the material that you can use, sound, affects your artistic language and since the user will be on the road listening to it, I am interested in her having as a stimulus things that also move on the road. On the other hand, in previous works, or in works that we never created, there was a thought to move to enclosed spaces and walking on the street to bring the inside outside. Which is an alternative approach but more static. In this case, Deleuze deals with movement and nomadism too and perhaps in a manichaistic way in relation to the concept of consolidation, which is also important for the work itself. For example here, we take Deleuze into consideration for the work because of the context (the theme of the conference). If this was a conference on medieval architecture, we would probably take another approach.

- What is the experience working collectively as a group?

It is a collective experience for the biggest part.

- So you are Akoo-o collective?

There is a talk about that, we are debating on removing the word 'collective', we have removed it already, but you can still see it in our blog. Which has to do with the use of the term collective...

- What about the collective practice... Is it collective listening?

Yes, it mostly is.

- How?

For Invisible Cities it was based on interviews, so we did those interviews separately, we were one or two people doing the interviews. Then we collected the material, we listened to it, we sent it to everybody, everybody listened to everything and we said ok, we have this material what are we doing with it. There was also the technical difficulty of us not being in the same place, so everybody worked on their own time, we transfer and so on. "Guys I did this interview, I am interested in this and this and that parts". Email, skype, etc.. We listened to the recordings. So first we all took the recordings, we edited them a bit from noise and then we brought everything together, we listened to everything together in a row, it took us almost two days. For this we met altogether and we discussed "Ok here what do you think about this or what do you think about the other", very detailed. So we edited, cut, the biggest part altogether: "Here we should remove this word, it needs to be more staccato, there..." you know. So we cut and re-cut and re-cut and after a certain point there wasn't enough time and we could not work 24 hours straight, but we had a sense of what everyone wanted to do so we continued the editing separately. And we sent the material again, and we heard the material again and then we did some more editing. And this work is even more porous relating to the natural soundscape. But we have also used artificial sound, which is a synth that Dana did, which serves in various levels. First it serves for the fear of emptiness, and that you understand that you are still inside the work while you are listening to this sound. Also, it is a background drone, a very calm and assertive, it subjects people into a walking rhythm, a very calm one and not at all competing with the voices, like a sonic carpet which had some volume ups and downs that bring even more forward the speech. Like a frame for the narratives, because they were narratives. Form them within, and this is what augmentation is, like a bubble inside the bubble, like a soundscape bubble inside the natural soundscape.

- What tools are you using? Recording devices, headphones.

We work with our own recording devices, I use an ediroll, Dana uses mine, Sofia has a zoom, Nikos has an ediroll and one more that I don't remember... And then, depending on what you want to record you go out in the field. When doing recordings, the result depends on the technology available, what kind of sounds you want to use... So by using different things and technologies there is a greater amplitude of 'words' disposable for use.

- And for editing?

Reaper, mostly. I used to work with *Protools* but it is a bit more complicated, I think I prefer reaper because it is more user friendly. *Protools* is super, but not very versatile. And since in workshops we use Reaper, because it is something that you can use for free and download it for free (trial), we prefer reaper. It is very good. Actually, any programme can do pretty much the same so it is a matter of usability. Reaper works for us. Other people use Audacity or Audition. After editing, we have Android phones and we are using *noTours* platform... You see, we don't have a programmer in our team and the guys from *Escoitar* are no longer interested in developing *noTours* further. And perhaps so should we, we should become somewhat detached from *noTours*. Actually, we have done some moves, some contacts with other people who might be interested in developing a soundwalk platform with us. We haven't started working yet but the market is developing, programmers are interested in these things. And we also have had some contacts with people that are doing locative media indoors. They don't use the satellite; they rather use beacons and compasses, which is a little bit restricting for us because we will have to use iPhone. We are also interested in indoor spaces, using beacons, because we couldn't use GPS indoors, but on the other hand it is restricting because Android phone don't have quality compasses, like iPhone does. Which also brings other issues to the front; which audience address our works, this public space sound art is very much relying to the available technology, you see, this is a prominent issue. I would like to use locative media to the extent that is needed. Having left behind the technological enchantment, I would like to focus on the walking aspect and maybe towards more unmediated listening. Of course, there is a different narrative available with using locative media in contrast to more unmediated types of listening. But ok, we are in the making of. I cannot say that we have started doing other things yet, however I would be interested in it. To disengage a bit from using mobile phones, perhaps to try more modest devices such as mp3 players, to experiment with other types of audio making.

- How about the collective. Why did you remove it from your name? How do you understand the term collective?

First, collective is a politically impregnated word and we didn't want to use it before we have discussed the way we function and work and our goals, which isn't something that we will disagree upon if we discuss the notion of collective. Apart from that, collective is a fantasy of communal in modern art and we aren't sure if we are interested in doing it, we are not that enchanted by this fantasy of communal, we just want to be a group of artists, we don't need to be a collective. For me it is a bit funny to use it. Are we a collective? What is that? Is it a cooperative with artistic goals? We use the term ironically, "we are artists, part of a collective..." You know, I think it's a bit cheesy (laughs)... in this sense that I described. Otherwise I wouldn't object to define ourselves as a collective but we would have to have the same mentality and discuss it and define our production terms, if we were more fighting as a group, you know, if you define yourself as a collective you have to be more fighting.

- Are you going to discuss it about becoming a collective in this sense?

No.... No... For me it involves a political stance, you know.

- What about working collectively?

As a member of Akoo-o, the biggest part of the work derives from the collective discussions that we have even before starting to work on the artwork. When we have an outcome, it is a collective outcome, our goals are co-decided and then we start working towards them. Apart from that, since someone might work on a specific part and someone else on another one, we find the beauty in pluralism. Even if someone doesn't fit in the co-decided goals, if he takes a detour, since we are discussing walks (smiles) – however this has never happened – even in this case, we welcome these small detours. For example, in *Invisible Cities* what we decided to do separately and then put everything together, they are not edited in the same way, they have different rhythms, different breath, cut and edited in a different manner, there is not a uniformity let's say, but this isn't a problem, we want this to happen.

- So, discussing is how 5 separate voices become one. And then, this one voice is edited individually where everyone brings their one subjectivity and the final result is the Akoo-o voice, incorporating George's, Dana's, Sofia's, Nikos' voices.

Exactly.

- How do you handle disagreement?

We all have the right to veto and this has happened often. And we don't mind that, we are all people that understand each other. We are open between us in the disagreements, placing judgements. For example, the synth piece that I told you about before, at the *Invisible Cities* project, there was a veto by someone. So, we said, let's try it with and without the synth and after trying both ways s/he was convinced and we kept it. You know, veto works. I believe in its usability more than I believe in unanimity. For example, if you insist on something do it and if we don't like it then it's your time and effort wasted, if we like it you get to do it. There is also a member of Akoo-o that cannot follow our crazy working rhythms since last year. So there, this person says, "guys I cannot follow everything that you are doing, I prefer to do fewer works and more sophisticated". However, the rest of us continue to work in these crazy rhythms, producing lots of works. Here, the attitude is "ok, guys if you think you can do it go on and do it but don't overdo it". We want to put our best effort and devote an appropriate amount of time in every work, and I agree with that, we will see how this is going... When someone cannot follow s/he doesn't force the other members to not do other works, we have the freedom within our group to pursue works even if not every member of the team can participate.

- Did you have any big disagreement?

No. Not yet. I don't know why I said yet. It doesn't mean anything. But there may be a big disagreement in the future, who knows, but that is ok. I have been part of various collectivities that took separate ways eventually. We had to achieve unanimity and we couldn't, so it didn't work for us.

What about maps? What is their role in your work?

I like maps and I work with them, but it is mostly Sofia that works with maps. Maps are a dominant representation of space. I like to 'de-face' the maps. But I am not a graphic designer therefore my approach is a bit amateur and I cannot be certain about the result. If it's good it's good, otherwise it isn't.

- What is good?

I don't know. Something that serves the purpose.

- And how does it serve it? What is the purpose?

Look, a map, as we know it serves the purpose of navigation. Our way of dealing with maps is very compositional. We compose on the map. We compose on a supposedly objective representation that the satellites provide us of the space from above. Also, a walker can use a map to navigate from one place to another. Issues such as that I don't like the hegemony of the satellite, that the satellite itself doesn't always work properly, that what is asked for sometimes is to escape from this way of viewing, are negotiated in our work.

- Maps on the device or maps on paper?

We mostly use maps on the devices. I like more paper maps but they don't work with the form of our works. The only reason to have maps on paper is to give them to participants. But the user can have the map with all the data in her phone.

- Is the map the score?

You see, let's say that you are going to listen to a concert at a concert hall and every member of the audience has the score with them. It is different. For us the score is the act of walking in itself, the space where it takes place. The map is a convention; it incorporates a relationship between vision and sonic experience. Our use of maps is instrumental. I like it though as art work too. But, I don't know.... You could say that the map is a score.

- And walking would be the performance of the score?

Yes. Yes of course. Yes, I agree. Walking is performing, and map is the score. But, you know a score in Sibelius, not a paper score...

- Unless you take the map and draw on it with your pencil?

Yes, but in this case, it won't sound. Unless you do it like Westerkamp, un-mediated walks or like Akio Suzuki... Geo-locating sounds is the hardest part, so if you are not familiar with using computers it is very difficult. Perhaps we should prepare some field recordings for the workshops, perhaps do some fieldwork.

- What happens in workshops?

For me when we do the workshop we can learn different things, as researchers. We say different things in a workshop and different things in an art work. And I think that what we learn from workshops are more important than the things we learn when developing a work. But what we want to say, we say it better in our works.

- Thank you.

Thank you.

- Can you describe what you are doing?

We are doing a walking *noTour*. Let's say that, these guys here are going on a walking tour (right before we started the interview there was a group of people gathering at the hostel's common room, waiting for the guide to come and lead a walking tour of the city) and the guide will tell them "here you can see this, there you can see that". Our goal is to inspire people to wander around the city, and from this wandering to be able to feel things, to feel what we have felt or make their own associations in relation to the city, or to any city. That is to use sound and walking, primarily sound, in order to achieve the provocation of the feeling, nostalgia, or the references, and while walking to combine it with a moving image, an image that does not move in front of you but you are moving along with it, in order to provoke emotion. This is what art is, to be able to evoke emotion, whether it is to feel sad or angry, it is another issue, depending on the city, because every city differs and because every sound differs and their combination brings different results. To evoke emotion. And what we mainly do is that we use the city as a score. I don't mean the map of the city, to look good, but the city itself where you can walk, sit, listen to different things, with or without the headphones. And in this score, the person who really writes the 'music' is not the person with the intention to provoke the emotion, ie Akoo-o, but the people themselves. For example, you might at some point take off the headphones and go to grab a bite, this is part of the 'composition' and in this context, people can achieve active listening, that is to have the headphones, being free from vision, so you can listen and see other things that you might not see otherwise, to relax your rhythms and be able, when you remove the headphones and go to have lunch to have the feeling that I am aware of the sounds I listen to, to promote this active listening, if it is possible, I am not sure, because some people wear the headphones and ask ok, where is the tour! (Laughs)

- How do you use sound?

What I have liked a lot so far, but I also have found a fertile ground to do it, in Athens, are the sounds of the birds. I like the theme of bird song in the city. That is because it is connected to Deleuze, you know, refrain, the bird, etc. I also like, when I go to places

and I listen to music, from cafeterias, bars, shops, whatever music they play. And I like to think how this would be heard somewhere that there are no shops or cafes. You know, when you walk, you come across a bar, you hear music (sings) and then as you walk the music fades, then you come across another bar, another music. So, how would it be to listen to those sounds somewhere where it is very quiet? That is to walk at a narrow, empty street and listen to music fading in and out. This is something that interests me a lot. This is the practical part. Now the theoretical, I like hidden things that you can find. And I like to look for, something that is very rare to find, things that are almost imperceptible and not so much to create, to take weak sounds and amplify them, rather than find sounds that you cannot easily find. For example, the voice of a girl singing somewhere. You walk in a very small, narrow road and you hear a girl rehearsing her singing, these are all examples from my experience, I have captured such sounds. Or a band that has just finished rehearsing and they make a harmony that they could not do during rehearsal. So, this is what interests me, the invisible, what is lost, and you will never find it again. It has a sense of nostalgia, or not so much nostalgia, but you will feel nostalgic about it at some point. This girl that I told you about that I recorded, for example, I never saw her, we never met, this happened outside of the police station at Leoharous road, you know the reputation of this road, and she was singing so beautifully, a medieval song, in an unknown language, when you capture this sound, this sound will die because it is a sound but also because the girl will die too, it makes me feel like I have discovered something very imperceptible, a secret, and you are able to use it somehow.

- How do you work with sound?

I use Reaper. I used to use other, better tools, but I bought a mac, because someone convinced me to buy a mac (she means George, who is still nearby, and she looks at him and smiles), and now reaper is the only programme that works with the mac, so I use the reaper. But you know, any programme works for me, so no problem.

- What is your goal when you edit your material?

Look, our practice is always the result of long conversations. Here (she means Ghent), only I have a laptop, it is just the two of us, but we always, from the beginning, we are discussing what we want to do. Will we use natural sounds, will we use music, are we

using background audio? So, in many occasions we use just natural sounds, other times we are combining field recordings with music, or we may use only composed sounds (*Analogio, Utopia*). My personal style combines all these elements and at the same time I want to achieve a randomness and a freshness, not an elaborate form, and also be a little bit eccentric on occasions, I don't like listening to very polished, perfect sounds. So, how this becomes a part of the collective voice, is a result of very long conversations, i.e. we discuss with Sofia, with Nikos, who is exceptional, and his ideas elevate the projects, with George, we try to convince one another. Okay, we don't always agree, but someone can say let's do it like this or like that and then we decide about the final result based on the opinion of the majority. And if someone sees how it's done after all he might be convinced or retreat, this is pretty much how we do it. I always try to persuade the others about my ideas, but this is not my goal, because everybody's aesthetic is very interesting, George's, Sofias', Nikos', everybody's work can represent the aesthetic of the other members, I trust the others, they can represent my aesthetic and I trust their work without even listening to what they did, I trust them completely, and I imagine that this is the case with them too.

- Do you have specific roles in the group?

Fortunately, everyone can do everything, except for Geert who doesn't know how to do the editing because he comes from a different field, everybody else works perfectly fine with sound, everybody, George, Sofia, Nikos... Now (she refers to the Ghent soundwalk), it is random that I do it now (gent again), it could be anybody else, and whoever would do it, I would trust them and I would not need to listen to it. Now, for example we don't send them (Nikos and Sofia) every version of what we did, asking for their opinion, we could, but, you know, without constant internet connection it is hard, but it is ok, there is trust, tomorrow they will go somewhere to do it and again I will trust them, so, and I think that is the basis of the collective, even though there was a discussion about the nature of the collective, which is irrelevant to how we do things, it is more political.

- You mean if you will use the term collective?

Yes, okay, I disagree with all this discussion, but okay, you know, I like the fact that there are discussions and questioning, you know we said that many collectives are

called collectives without having this collectivity which has been characterised as anarchist, to me it sounds a bit stupid because, okay, this happens only in Greece and after all, if anarchists work as collectives, i.e. without leader, then even better, we are more people doing it, you see, or, you see how I perceive it, as we understand it in Greece... and we don't need to project this to everything that is happening in the world, this talk is limited around the Exarcheia neighbourhood at the most, I don't think that, we are in Gent now.

- What about listening collectively?

I don't think that you will recognise what you have been listening to (she refers to the first walk on day one where they captured most of their recordings) because it is a bit... Look when I first came here, I realised that I like very much the sound of the wheels on the paved roads, and I also like breaks and I like anything with wheels on every road, and sidewalk, and also the trams, and the bikes, and the cars which also have wheels, (makes a sound ΝΤΟΥΦ!), so these are the sounds that fascinate me because they are not the sounds that I am used to listen, or haven't heard before, and this result is the cutting and pasting from many mechanical sounds, it has of course, you can recognise landscapes, not landscapes, but you can recognise the general soundscape, but it has many sounds of breaks, bells, cars, suitcases, many such sounds, so, it is not so much about listening to the sound of Ghent, rather than listening to the mechanical sounds of the city, and I think that generally speaking, it has (Ghent) something mechanical: the clocks, the, I don't know, it inspires to me a mechanistical feeling, not mechanistical, yes, something mechanistical, something, it could be like, the bridges could open and close and change, I don't know, the clocks, the towers, their rhythm...

- The architectural rhythm gives the rhythm to the composition?

No, not so much, but, it gives me this feeling, this was my first impression and ok, you know, we didn't have much time, to tell you that I have known the city, so this is it and ok, as I understand it, I don't believe that it is necessary, for the design of a conference soundwalk to give the exact soundscape of the city. Because if someone wants the exact soundscape of the city they should take off the headphones or better not take them at all and listen to the city soundscape and it will be more interesting if they

discover things, otherwise, there is what we do, which is, that we offer something else to listen to, our version of it.

- What is augmented aurality for you and how do you achieve it?

First, it is that someone can listen to the real sounds not with an added layer of extra real sounds, rather than listen to my sonic reality. Or for example in this specific project we have let people know that they can send their audio files, so we will be happy to include their sonic realities, somehow it is... I have this feeling about the city, we have discussed it with Geert and George, and we did this, we created our sonic vision of the city and when someone listens to it they will augment their reality, they will combine our acoustic reality with theirs. Now, I may not agree that acoustic augmentation means that you, let's say walk in front of a church so you have to put bell sounds on the spot, right, I think that it is a bit, even though I have done this, but I have done this more in the sense that, let's say where there was a church I had used a song which I like very much and bring me certain memories and also the specific church brings me certain memories and I had used this song because it reminds me of certain things, but this is my view point, someone who will pass by this church will listen my view point, my cohesion about this place. Now, if this cohesion and this sound and this image can provoke to the person their own cohesions, obviously because nobody can enter my mind or yours, or, then this is the best, or even better create a new synopsis, that would be nice. And ok, what we are doing may not have a very elaborate form, the form that you usually find in music, because I see it from the musician's viewpoint, but it has a form, the form of our perception of things, and our own method and own way of categorisation... Okay, you can say that I will use the sonata or the fugue form, but you don't need to do it because, you know, music and sound art use the same material and in reality, you know, I believe that sound art is now music... I cannot tell you that someone who writes neoclassical or twelve-tone are okay or is now ok. Well it was contemporary, but it is not contemporary anymore and this convergence of music with visual arts, with walking and with architecture that is happening for a long time now, in the form of a new 'gesamkunstwerk' but with new technological means, this is very beautiful and I can understand it as music. Well you know, I also come from the conservatory, from musicology, from, and you know, but I can feel it as music, in its composition because it may not have this elaboration

that harmony has, or the motif or, contra-motif or a melody, however someone could do it like that if there was a need to be done like that, however I don't think that it would be a nice result, but it could..

- Your goal is to make the user feel this like it is music?

Well, to tell you the truth I don't want the listener to enter this, my diptych, road vs conservatory. If I want them to feel it like music? I would want to evoke emotion, and music for me does this thing, not elaborate notes, but the representation of the emotion, this is how I understand it, so if what I do can represent or evoke emotion I am ok, this is music for me. Okay, it is not a concert, but okay...

- Thank you

You are welcome.

Impossible Inaudible Soundwalk interviews

After the Impossible Inaudible Soundwalk workshop in February 2016, I invited participants for an interview to reflect on their experience of the workshop. Participants 1, 2 & 3 agreed to conduct a walking interview while experiencing the soundwalk. Participant 4 only contributed to the group discussions during the workshop. Below are the transcripts:

Participant 1, early 20s, architect, male

- What is your relationship with sound, sound art, sound recording, in general, before you came to the workshop?

I was nearly new to the whole thing, in the sense that my dissertation only begun just after Christmas, so that's when I began, sort of researching..., so fairly open I suppose, I didn't have any pre-conceived ideas about what might happen at the workshop or have any theoretical background that I came with, so I was fairly open to everything.

- What drew you, what made you decide to devote a certain amount of time during ILW to participate to this workshop, what was the motive?

Well, yes, I suppose outside my dissertation, there is a sort of interest in sound, and coming from an architectural background, sound and space, and I suppose, looking forward I had some sort of desire to learn or work in that area. So, I suppose that sort of drew me and then obviously writing my dissertation, I wanted to get some sort of practical experience within the sound world.

- And what about site-specificity, geo-location, what did you know about that?

I have been reading some stuff about, obviously some Schaefer, acoustic territories, LaBelle, how sound contributes in the sense of place, in terms of memory and time I suppose.

- What were your expectations about this workshop? Were, they fulfilled in a way?

I think definitely, I came with a sort of desire to, so I had this recorder but I didn't know how to use it so, first of all learning how to use that and then sort of what to do with the recordings, because I didn't have any knowledge about software, or different mics, so just bringing that back into the studio and even just downloading the files and

putting them into these software in order to edit them, and then just listening, as well, sort of removing yourself from where these sounds have come from I suppose and listen to them as just sounds, that's interesting, so it definitely felt like I learned a lot from this experience.

- What about the structure of the workshop?

Yes, yes, I thought that Monday was useful in that it was a sort of recalling a lot of the stuff that I have been reading but bringing in lots of case studies as well, because I haven't really looked into case studies yet, so sort of seeing how people have used these ideas in practice was really interesting. And then, Tuesday, the recordings, it was very cold! I feel like it might have been better if we had more time in the field but, obviously, time was tight, but maybe, a little less of the theory, a little more time in the field might have been good. And then, I suppose, getting more into editing, but I wasn't there for some of that, so I maybe didn't fully gain from everything that was on offer, but definitely I would have liked to get more into that I suppose...

Participant 2, 50s, composer, female, 25/02/2016.

- What is your relationship with sound?

Well, I've done a little bit of work with sound, I am a composer, so I suppose my focus is more on composition, and originally, I was a classical composer but I have started doing electroacoustic composition about a year ago, and through building up that portfolio, I came into the digital composition course here. So, my work doing electroacoustic composition involves sound and recording and so on and manipulating sound. So, I've done a little bit before arriving at Edinburgh and then at last semester I took an option with Martin Parker called sound design media, so I did a good bit of sound recording, sound designing I suppose as part of that. That was useful as well. I have not done any site-specific sound art before. Although I have done themed things. For example, when I did an electroacoustic composition on extended techniques of the violin. I took extended techniques of the violin for the sound parts as well and kind of manipulated them in something that sounded quite different.

- Why did you decide to take part in this workshop?

Fiona: I am quite interested generally in policy because of my previous career as a civil servant in the Scottish government so I have done a lot of policy work advising ministers on all sorts of things due with the environment and urban regeneration, and thinking about planning and climate change, a whole sort of range of public policy. I am still quite interested in the kind of policy side, but I am also quite interested at sound from the perspective of, I think I said it in the workshop, sound and/or music I suppose, from the perspective further policy objectives. So, you know, if there is a policy objective for economic development can sound art or music play a part of that? And I believe it can, depending on how to use it. I think things like doing events or initiatives in for example in a remote area, can bring people to the area and then the area benefits generally, you know there are some examples of projects like that. I was kind of interested in learning as much as I can when I am here and taking every opportunity that I can... I mean it is hard work, you have to push yourself, and during that week I probably did more than most people. But you know, it's good to have taken the opportunity and I am really glad to have done it because I think I can see loads of potentials for sound art and soundwalks and in all sorts of directions so... and there

is a possibility I think of generating some income which is the kind of issue that I have with all the stuff that I do as well. This is great, experimental composition, but how are you making any money out of that. So yeah, finding a way to produce good quality work whilst hopefully at some point, I will be able to generate some sort of living out of it.

- Can we go back and reflect on what we did this week?

Monday we did theory which was interesting I think in context, I am not sure how much I would remember actually, I think it would be good to have the slides so that I can go back and re-read them. So yes, I think that that was interesting just in terms of making us aware of the theory which those of us not from a sound background probably wouldn't have as much knowledge about... So, I think from that perspective it was useful. I suppose my kind of slight feedback for doing things differently would be just to cut that a little bit or change the timings a little bit because of all the other responsibilities... Tuesday were the recordings. It was the first time I've done that, a soundwalk around town with headphones on, so that was very interesting because you do hear things in a totally different way, and all of the recording I have done previously has been in the studio, I've never done field recordings so that was very interesting to do and to hear, the sound around you in a kind of different way. Because clearly, when we listen without headphones we must be screening things out a lot, because our brain is programmed to do that, We must be hearing the sound but we are screening out in a way that it kind of makes the foreground and background different from what you hear with your headphones on, so that was really interesting. I mean I was just choosing the basic zoom with the microphone that came with it, so it would be interesting to hear with a shotgun mic or something, but I didn't really use that. Because I just decided to go on, I didn't want to come back, so I just decided to go and have a good walk around and see what I could kind of pickup with it. So, I just chose the two microphones, the xy and the omni, but it was interesting. I think that if I continued doing it I would get hold of a shotgun mic or a contact mic, to try different things as well. But it was very interesting. In relation to the space, because I haven't done any other field recordings I don't know if there is another more interesting place to go. I find it hardtop get away from the traffic noises and the toots, even though we were in princes street gardens there was a kind of background rumble all the time,

and it was very windy as well, but generally I find it really interesting that there are lots of things happening in the gardens and during the walk we did along princes street with the pipers... I thought the location was pretty good from the perspective of the theme that we were looking at which was the sounds of the city and what represents Edinburgh. But it was surprising how loud it was, how loud the city is and I just not really notice it so, that part was interesting. After that I worked on my own, I did quite a lot of editing and I suppose composition, I was clearing all that sounds, or sound design, anyway so I did that stuff on Wednesday which was kind of time consuming and I am not sure but if I had understood more of how the software worked, the platform, with the possibility of overlapping lots of sounds on the map, I might have done less on the composition side of it. I think in the future it is something I would consider experimenting with, sort of mixing on the map... *noTours* I have found the website interesting and I also did the Echoes workshop so I could see the contrast between the two and what I felt was that *noTours* software is probably more flexible in terms of what you can do on the platform, there are more menu options and more flexibility on how to manipulate sound within the platform, but in terms of it being available only on android, also the difficulties that I had when I tried to load it onto my android has kind of made me wonder... it is fine on the laptop but moving it onto the android... and I have tried everything... I emailed the website, but they haven't answered back so.

- How do you feel about the outcome?

I am actually really motivated by it! I think I am not sure what I had expected never having done the soundwalk before but I find it really interesting and I find that the platform amazing, I actually thought it would be harder with all the GPS stuff, but the fact that it is just a platform on the web and you just download an app onto your phone I think the process should be easier than I had imagined it would be, I had imagined there'd be a lot more technical barriers to be able to make it all work, so from that perspective I think it is kind of encouraging and I can see lots of scope for it actually in terms of projects... I actually thought I might use it as part of my final project. Or I might set it up not in Edinburgh actually, maybe somewhere in the western isles, or something like that because it is a remote area, and because I think subsequently if

you were to put something together in terms of a soundwalk it would be useful to the community. I might look at doing something like that, but we will see.

Participant 3, mid 20s, sound designer, male, 22/02/2016.

- What made you decide to attend and participate in the workshop and which were your expectations of it?

I am trying to think back, the description, and I think that, well it had a bold title and I saw the posters all over the place and, so that seemed cool and at the same time I kind of noticed it just as a friend of mine just started to talk about walking art, it is something that she really gotten into and she is kind of trying to make a loose sort of group of people who have a kind of, a sort of amorphous kind of collaboration about walking art, so I was just trying to kind of discover more about that and you know this came along advertising itself as sound walk so I was interested in that. I was expecting it to be a single session on Monday but, I am glad of all the sessions that happened... I guess my other expectation was that it would draw a lot more people from outside the music department and sound designers, which was a little bit of shame that didn't happen... And I felt bad that I was just sticking in my own discipline, rather than going off and learn to use glass or... I mean it was great you know how much Jas got into it, you know coming from different ...

- In terms of your expectations about the workshop, what did you get out of it?

I had a completely renewed enthusiasm, or obsession with the field recording and I mean I usually keep my zoom on me but I was conscious that I could take it out any moment and just the, cause my problem has always been when I make field recordings, the problem is putting to use them, you know listening back to them, kind of keeping them around and sort of, and so I had the opportunity to do more with the editing, I missed the morning session of the editing, but even just, I mean especially seeing Jas's pieces was really inspiring, so yes, it was that, I mean I really enjoyed on Monday that it was quite theoretical and kind of political, in the way you know that a lot of our classes, well maybe sometimes try to introduce ideas like that but not so, they don't want to scare away techies (laughs), so that was good, although then I am still unsure of how much all of that, of the first discussions was applied on what we did, cause we were just carried away with the, you know just doing it, but yes, it was really positive.

- Okay, let's walk!

The drone thing... I am only getting it in my right ear... but it is strange, it should be in both ears... Every time it is a surprise. You will never know what will or won't work... I can hear the bagpipes standing here, standing, tall... They are very present, the bagpipes, and it is not the only place where you can hear them... Funny we decided that the tree signs intersect in this side of the pavement where there is no desire to linger... these constant bus breaks are great, it feels like you kind of, you can look out for the first, like 20 seconds, so you could be hearing it anyway, and then at some point think, yeah, how long does it take to, to break your assumption that that's normal, that you are conditioning to it... so now it is just my sound of the leaf... it feels like some kind of event is happening into a kind of emptiness, the drone really contributes to it... so yes this was, I almost needed to come back to a meeting place so that we could go and walk on princes street... by that point, after one hour and a half of wandering around it was a bit more of heightened senses and I think it was the first time I had taken off my headphones after a while and so that was really important cause suddenly you kind of go onwards, you know, "what's that over there", so I like heard the tree and pin-pointed it and then kind of went and slid straight down under it struggling to get the recording started as the bells were going, so there are all these recordings that are burnt by wind... That was a perfect way to composing a lot because the start of the bagpipes is very definite kind of thing that it says you are here, kind of like "there is a reason for you to be standing here" and then I think in front of the informatics building was Calum's thing, so that's more abstract and then I came out of that zone of intersection and it is kind of empty, an area of waiting and then even that went and it was just the drone, I is like we're gone from the emptiness, the organic emptiness of leaves to just the drone and then suddenly from that to a rumble which also feels synthetic... It is nice to get to enjoy the wind!... Sometimes the drone becomes quite strong, too prominent... The train is really good with the wind over it, it is such a long/loud sound, is like touroutoutou touroutoutou... oh this is my sound, it is the gallery, it is good that it kind of announces itself with the squeak on the floor it really kind of sounds the space out and you realize that you are in a different space... Sometimes you don't have to look on the map to know that something else is happening... I know this time felt like I was cheating because I saw it approach... there is another circle here that I cannot distinguish... I wonder if by walking naturally you actually encounter that final surprise (refers to the recording he did), so this

recording was, after we done the walking-recording thing, so I was kind of obsessed, I couldn't stop!... I guess I am still cheating; I was kind of purposefully hovering on the edge so it could be the end... Oh, this is one of my favourites', Calum's, bell loop, I feel like it could have been a much wider circle. It is kind of the perfect passage, in the soundwalk where you have to go along this street to kind of join two places up and you just have to walk, kind of waiting to get to the next place and then this thing is just looping... So, I am not sure how well that works in this place particularly but it is a great sound... Oh, more bagpipes! The bagpipes are messing with Fiona's piece. I feel like this should be a really small circle, just under those trees, because then you arrive into it, it really overhypes the inaccuracy of the location... This is perfect for this space (electromagnetic for the labyrinth probably). I felt like we never decided to find something specific for Jaz's pieces, but it is good here, we can focus on it and the fact it goes in so many places and has so many sharp turns it is like the labyrinth... So, I wonder if it would match the time needed to go around... I am trying to imagine that this is a soundwalk in itself composed for all the twists in the... Jaz's piece is over. I feel that George sq. should have three small circles with these pieces (Jaz, Fiona, Calum). I feel I should give sound time, I don't know if people gave those sounds enough time... I feel bad that Calum's piece is here, because it is a perfect filler sound, and this is a kind of filler space but then you are in a feeler space which is somehow more of a space in itself, I don't know, that is kind of contradictory... This is a good one to walk through, it's got a kind of shifting of space in the same pace as the walk... This is kind of an end point for the walk, you know you reached the top, it doesn't stretch that far so it is a good place to arrive... I really wanted to use it this lane because it feels like a secret space even though it's just there next to the middle meadow walk... It makes me think of hiding behind the chairs, it is a secret space because no one, no adult will squeeze themselves into it, but you are right there, you are looking right at them... it is a really good way of defining the secret space, isn't it, something makes you really focus in what you are listening... I really wanted to have a contrast between the contact mic recordings and the acoustic ones... It is almost too well composed here, the discussion ended and then the car came by, it's like someone added the car whereas it was more the discussion were interrupted by the car, and you take this one single recording and reverse it and it is quite like prophecy that the discussion ends with the car, but then you notice that when the car passes they are still talking like

they haven't listened to the car... And in the Quartermile, I don't know how the experience of this square in the night times it would be the same... This is like the farthest out space in the walk and psychologically it is like... it really does suit this space (Jaz electromagnetic piece – same as labyrinth), but it suits the labyrinth too, but it can't be both, you have to decide what meaning it has, I feel like here, the harsh elements of the recording are a reaction to the space, whereas in the labyrinth, the labyrinth was telling you "just stick to it it's not noise, it's sound!". It is such an empty space, it so wants to be a plaza, it is a busy enough day; like there are people, but it is just, it is something, that square... It's like Jaz's piece is telling you go away! Where in the labyrinth as you mentioned it said, "stay here!" It is the same piece but its operation, its *raison d'être* changes because of what you are looking at... It is good that we have the opportunity to explore the differs qualities, but I don't know, should I be thinking in terms of a potential outside spectator, like someone who has been given, I guess that's just the fantasy really, I mean I might show it to a friend of mine but other than that it is just for us so, I might not need to worry about that... Sometimes I wish there wasn't a separation, so you can mix the outside and inside sounds. The headphones afford this separation you kind of looking through the window at the sounds outside...

Participant 4, director and activist, mid 30s, female | The *Singalong* story,
18/02/2016

This recording was made a few years back. She was walking back home, passing by the top of middle meadow walk when she saw a group of homeless people listening to music projected from a small boombox and singing along. At the time she was doing some field recordings for a documentary she was preparing, and she didn't realise leaving the microphone on while talking to them. When she went back home, she forgot about this recording. But when she signed up for the workshop, she revisited her archive, and after listening to it again, she decided she wanted to use it somehow.

Group discussions

These are excerpts from the notes I took after experiencing the *Impossible Inaudible Soundwalk* with different percipients. Percipients 5, 6 & 7 experienced the soundwalk without participating in the workshop.

Moments that stood out: Walking in the Meadows and listening to the car sounds. They made her think of the audio-visual contrast. The sound of a car made her look behind but there was no car, just the noise of a car. Sound can augment how you feel about a space, or how you should behave in a space almost. In the meadows you feel like you can relax and not look for cars, that was where she felt she should be looking around. The weird sense that things overlap (Percipient 5, writer, late 20s, female, 29/09/2017.)

Moments that stood out: The small lane beside middle meadow walk with the ice cracking. As she was descending down that hill, it became more and more water-y, like you were walking close to a pond or something. Another interesting area is the Quartermile which is very empty, there is not much life in there but then you have these school children coming in and all these noises of a busy road, it suddenly felt full of life even though no one was there (Percipient 6, early 30s, University staff, female, 29/09/2017).

Feelings of connectedness to other walkers because she was sharing the same experience, while at the same time she felt she was on an individual mission. On the one hand connected to the others participating in the same experience of group membership, while feeling to some extent separated from others, a feeling of immersion in an independent sound journey. As she moved, she could feel spaces different. Open spaces felt vibrant, like the church and the gardens, and then when she arrived on the square behind the lecture theatre, the space felt different because of the wind that kept cutting in (Percipient 7, mid 30s, University staff, female, 29/09/2017).

Appendix B | Following the Akoo-o group

Akoo-o is a group of artists and researchers that use sound and mobility as vehicles of expression and social inquiry.¹⁵³ Departing from different fields, such as visual arts, cultural studies, musicology, and anthropology, Akoo-o are sharing a common understanding of sound as a cultural material that transgresses the limits of their disciplines. At the same time, they consider walking to be a cultural-artistic practice that carves pathways between their own theoretical milieus and leads to meeting points with others; while their work is based on research that includes the process of collaboration in their artistic practice - through workshops and creative collaborations with other artists. Since their first meeting in 2013, they have worked on common projects, workshops, and panels, and engaged in vivid discussions that involved their shared interest in sound, mapping, promenadology, and the relation between the arts, technological mediation and the city.

Collaborators in Akoo-o, as researchers, artists and practitioners, are exploring the variety of opportunities for creative expression in public space, which is afforded by new media. Their practice is collaborative, creative, and socially engaged. Through the development of sound art works (sound walks/maps, installations exhibitions, and workshops), they use locative media to engage in experimental cartographic representations of sound. Their projects address and challenge interactions between the physical sound environment (soundscape), the sound milieu of a social-cultural community, and the internal soundscape of every individual. In their projects they are exploring the intersubjectivity of collective listening and citizens' relation with place; and they deploy place-based narratives to represent the acoustic properties of the urban soundscape. Collaborative practices and the reciprocity featured within and as a result of these collaborations, bring to the fore relationships between collective aesthetic and individual artistic sensibility, wherein issues of power relations and hierarchy can come into play. Emerging from different fields, Akoo-o and its practices understand and use sound as cultural material; through an interdisciplinary lens that addresses the social dimension of musico-sonic experience. Albeit that they do not

¹⁵³ The group Akoo-o is based in Athens, Greece. Members are: Dana (musicologist), Giorgos (visual anthropologist), Sofia (artist) and Nikos (sociologist). They frequently organize various *noTours* workshops and soundwalks with interested participants. <https://akooocollective.wordpress.com/>

define their group as a collective, it is collective creativity, distributed agency and shared authorship that combine in the approach through which they understand and theorize intercultural collaborations.

Cracks on the soundwalk, Audiowalk commissioned by the conference DARE, Belgium (2015)

I had the opportunity to follow Akoo-o to Ghent, Belgium, in November 2015, to participate in and observe the making of their work *Cracks on the soundwalk*, which was commissioned by the DARE conference organisers.¹⁵⁴ During the time that I spent with Akoo-o, we went for walks in the city of Ghent, organised field recording expeditions, spent much time writing, talking, thinking about, listening to and editing the sounds, photos, sketches and the experiences we had collected. As per the procedure, the sounds recorded in Ghent were combined and composed to a sound walk, available for download for all conference participants. Each one was encouraged to contribute with sounds, soundscapes, narratives and stories recorded during their stay or their voyage towards Ghent; and the result was meant to be listened to while walking in the city of Ghent, inside and outside the conference venues or while walking from one conference venue to the other. The soundscape composition changed daily as new sounds were added; and the blog created for the walk was constantly renewed with sounds recorded in Ghent during the International Conference on Deleuze and Artistic Research DARE 2015.

Since this was a commissioned work, I followed Dana and George during their walking, listening and recording tours in the city of Ghent, to observe the processes and practices that lead to the creation of a sound walk. I was particularly interested in the raw material of the field recordings and what transformed it into sonic marks of interest:

[...] stone is very important, water is very important, and trams are very important, characteristic to the city, and the sound of bikes.

(Giorgos, Akoo-o)

The concept of machine or mechanic sounds and how they are understood and interpreted also inspires the composition:

I like the sound of the wheels on the paved roads, and I also like brakes and I like anything with wheels on the road, and on the sidewalk, and the trams, and the bikes, and the cars, which also have wheels. So, these are the sounds that

¹⁵⁴ DARE 2015 conference reflected on the duality and openness inherent to artistic research <https://dareconferences.org/conference/dare2015/>

fascinate me [...] the cutting and pasting from many “mechanic” sounds [...] sounds of brakes, bells, cars, suitcases. It [Ghent] inspires to me a mechanical feeling, it could be like, the bridges could open and close and change, the clocks, the towers, their rhythms...

(Dana, Akoo-o)

This compositional process in the curation of the sonic material, enables the creation of hybrid spaces, experienced through augmented aurality. This augmentation of the acoustic experience leads to the immersion of the experiencer in a hybrid space constructed by sound:

...My understanding for it [augmented aurality] is that it is an environment within an environment. Like a hybrid space between reality - which is what happens out there - and a second layer, which is our own interpretation of space with acoustic terms. This, as a vehicle for artistic expression, we are managing it in relation to the actual space; both how you do it and what you want to say with it... (Giorgos)

We created our sonic vision of the city and when someone listens to it they will augment their reality, they will combine our acoustic reality with theirs. If our stories and our sounds can provoke to the listeners their own stories, create a new synopsis, then this what we want (Dana)

Technology plays an important role in the construction of the experience:

We work with our own recording devices, I use an Ediroll, Dana uses mine, Sofia has a Zoom, Nikos has an Ediroll and one more [...] So, by using different things and technologies there is a greater amplitude of “words” disposable for use. I used to work with Protools but it is a bit more complicated, I think I prefer Reaper because it is more user friendly. Protools is super, but not very versatile. And since in workshops we use Reaper, because it is something that you can use for free and download it for free, we prefer it. (Giorgos)

Akoo-o had been using *noTours* for their works until 2016, but Escoitar are no longer interested in developing it further. This has prompted them to contact other programmers to develop a sound walk/map platform in collaboration with Akoo-o, because as Giorgos mentions, this market is fast developing. Since 2016 thus, Akoo-o have made their walking sound art works using the Sonic Planet app (developed by Sinan Bokesoy)¹⁵⁵ and Echoes creator (developed by Josh Kopeček).¹⁵⁶

¹⁵⁵ <https://starts-prize.aec.at/en/sonicplanet/>

¹⁵⁶ <https://echoes.xyz/>

Which also brings other issues to the fore; which audience addresses our works, this public space sound art is very much relying to the available technology, you see, this is a prominent issue.

A prominent issue with several sound art works in public space, is how much they rely to the available technologies, and the fact that they are addressed to digital elite audiences. Another factor to be considered when experiencing the hybrid space of a soundwalk piece, is the mediation of technology and how this can be used to construct or deconstruct the experience of situated perception:

I would like to use locative media to the extent that is needed. Having left behind the technological enchantment, I would like to focus on the walking aspect and maybe towards more unmediated listening [...] to disengage a bit from using mobile phones, perhaps to try more modest devices such as mp3 players, to experiment with other types of audio making. (Giorgos)

Creative and collaborative endeavour lie in the core of Akoo-o practice. Collaborative listening and processing of audio material becomes a knowledge-making process, even if not all the team is active at the same time. Their interest lies in the collaborative practice:

The discussions and the works that derive from those discussions are what bring us together ... We are a team with coequal relations... we discuss and agree about the final result... we do work altogether... There is this interaction, this respect and willingness to draw back from everyone... There are works where we work alone and others that we work collectively. When we work collectively, I enjoy it a lot because we get to gather together at someone's home, we are brainstorming, we have one laptop and we listen altogether. It may take a lot of time, we may consume more food, alcohol and tobacco, but it is very creative. (Sophia, Akoo-o)

Betwixt sound, art and social reality

In my fieldtrip to Athens in February 2016, I visited TWIXTlab,¹⁵⁷ which by employing a laboratory form, proposes and supports art and research projects, seminars, workshops, screenings, presentations, discussions etc. and open to anyone wishing to participate, without any prerequisites on background knowledge of contemporary art and/or anthropology. Its activities bring together artistic and scientific research and are characterized by their systematic reference to humanities' critical discourse. During the 2015-2016 academic year, Akoo-o led a series of seminars on Acoustic Ecology, entitled *A Walker's Guide to Sound Art* at TWIXT. These included discussions, use of audiovisual materials, presentations and hands-on sessions, such as the practice of walking and different modes of listening, the manufacturing of hand-made microphones, recording and audio editing techniques and acquaintance with soundmapping tools. Together with seminar participants, Akoo-o examined artistic practices and discourses on the subjects of public space, walking and sound.

At Akoo-o's invitation, I participated in one of those sessions. Focusing on walking and listening from an artistic and anthropological view, we analysed different sound art works that address walking as artistic practice during a 3-hour workshop; considering their social, political and other ramifications, both past and current. My aim was to initiate fruitful dialogue, which would provide meaningful insights on issues of creativity, informed by the social interactions, relations and networks of the listening public, as well as the opportunities for the creative and distributed agency of this public, now arising from sound art. We examined and analysed a wide variety of sound art works in public space, and during these conversations, I observed the emergence of collaborative and participatory strategies that would later inform the

¹⁵⁷ TWIXTlab is a research-artistic initiative situated between and "betwixt contemporary art, anthropology and social reality." TWIXTlab was founded in 2014 and since then it has adopted the form of a laboratory in order to propose or to support interventions in everyday life. It proposes art and research projects, seminars, workshops, screenings, presentations, discussions etc., open to anyone wishing to participate without any prerequisites on background knowledge of contemporary art and/or anthropology. TWIXTlab's activities bring together artistic and scientific research and are characterized by their systematic reference to humanities' critical discourse. TWIXTlab was founded in 2014 based on an idea by Elpida Rikou with the collaboration of Sofia Grigoriadou (Akoo-o) and Io Chaviara, who left the project in October 2016 (https://twixtlab.wordpress.com/about_eng/). Since then, Giorgos Samantas (Akoo-o) joined the team. Twixt is located at the basement of a multi-story block of flats at Pagrati neighbourhood in Athens.

design and implementation of these ideas by workshop participants in their own works. And during the last part of the seminar, we focused on their final projects. Deploying different approaches and technologies, the idea of soundmapping was a shared interest and a way to communicate personal experiences. These were not just sounds; they could be literature quotes that had a special meaning, or a field recording that documented a specific experience of their neighbourhoods and everyday lives. We understood soundmaps as ways of telling personal stories, wherein the narrative was shaped by their own aesthetic and experiences.

Bibliography

- Adams, M., Bruce, N.S., Davies, W.J., Cain, R., Jennings, P., Carlyle, A., Cusack, P., Hume, K. & Plack, C. (2008) Soundwalking as a methodology for understanding soundscapes. Available from: <<http://usir.salford.ac.uk/2461>> [Accessed 14 January 2015].
- Adams, M., Cox, T., Moore, G., Croxford, B., Refaee, M. & Sharples, S. (2006) Sustainable soundscapes: noise policy and the urban experience. *Urban Studies*, 43 (13), pp.2385–2398.
- Ahmed, A. & Donnan, H. (1994) *Islam in the Age of Postmodernity*. London; New York, Routledge.
- Ahmed, S. (2014) *The Cultural Politics of Emotion*. Edinburgh, Edinburgh University Press.
- Ahmed, S. (2006) *Queer phenomenology: Orientations, objects, others*. Duke University Press.
- Aitchison, B. (2018) Answer the Question. *Theatre, Dance and Performance Training*, 9 (1), pp.116–119. Available from: <<http://www.tandfonline.com/doi/abs/10.1080/19443927.2015.1014218>>.
- Altavilla, A. & Tanaka, A. (2012) The Quiet Walk: Sonic Memories and Mobile Cartography. In: *9th Sound and Music Computing Conference*. Available from: <<http://smcnetwork.org/system/files/smc2012-202.pdf>> [Accessed 5 December 2014].
- Ana Maria Ochoa Gautier (2014) *Aurality: Listening and Knowledge in Nineteenth-Century Colombia*. Durham & London, Duke University Press.
- Anderson, B. (2018) Cultural geography II: The force of representations. *Progress in Human Geography*, pp.1–13. Available from: <<http://journals.sagepub.com/doi/10.1177/0309132518761431>>.
- Anderson, B. (2016) *Imagined Communities. Reflections on the Origin and Spread of Nationalism*. 1983rd ed. London & New York, Verso.

- Anderson, B. (2014) *Encountering Affect: Capacities, Apparatuses, Conditions*. London, Routledge.
- Anderson, B. & Wylie, J. (2009) On geography and materiality. *Environment and Planning*, 41, pp.318–336.
- Anderson, I. (2015) Soundmapping Beyond The Grid: Alternative Cartographies of Sound. *Journal of Sonic Studies*, 11.
- Anderson, J. (2004) Talking whilst walking : archaeology a geographical of knowledge. *Area*, 36 (3), pp.254–261.
- Anon (2018) Receptivity: Receptivität (German) [Internet]. Available from: <<http://hume.ucdavis.edu/mattey/phi175/receptivity.html>> [Accessed 10 December 2018].
- Anon (2015) Instrumentalist, Moi? *Art Monthly*, pp.18–20.
- Anzieu, D. (1976) L' envelope sonore du soi. *Nouvelle review de pschoanalyse*, 13, pp.167–170.
- Appadurai, A. (1996) *Modernity at large: cultural dimensions of globalization (Vol. 1)*. University of Minnesota Press.
- Appadurai, A. (1990) Disjuncture and difference in the global cultural economy. *Theory, culture & society*, 7 (2–3), pp.295–310.
- Arnason, G. (2012) *Biopower (Foucault)*. Second Edi. Elsevier Inc. Available from: <<http://linkinghub.elsevier.com/retrieve/pii/B9780123739322002362>>.
- Arns, I. (2004) Interaction, Participation, Networking. Art and telecommunication. [Internet]. Available from: <http://www.medienkunstnetz.de/themes/overview_of_media_art/communication/print/>.
- Atkinson, R. (2007) Ecology of sound: The sonic order of urban space. *Urban Studies*, 44 (10), pp.1905–1917.
- Augé, M. (1995) *Non-Places: Introduction to an Anthropology of Supermodernity*.

London, Verso.

Augoyard, J.F. (2007) *Step by Step. Everyday Walks in a French urbana Housing Project*. Minneapolis; London, University of Minnesota Press.

Augoyard, J.F. & Torgue, H. (2005) *Sonic Experience. A Guide to Everyday Sounds*. J. F. Augoyard & H. Torgue eds. Montreal, McGill-Queen's University Press.

Aumond, P. (2016) *da_sense* [Internet]. Available from:
<https://soundcartography.wordpress.com/2016/08/04/da_sense/>
[Accessed 3 December 2018].

Aumond, P. (2015) *Bruit Paris* [Internet]. Available from:
<<https://soundcartography.wordpress.com/2015/11/10/article-3/>>
[Accessed 3 December 2018].

Barad, K. (2007) Meeting the Universe Halfway. *Meeting the Universe Halfway*, pp.39–70. Available from:
<<https://read.dukeupress.edu/books/book/1068/chapter/151817/>>.

Barahona Rios, A., Estevez Fernandez, L., Cui, H. & Huang, S. (2018) Revealing the Invisible City : Comprehending the human-city bond through data visualisation and sonification. *Airea: Arts & Interdisciplinary Research*, 1, pp.11–27.

Barbanti, R. (2004) Meccanicismo e determinismo: Ovvero come lo sguardo, fissandosi sulle cose, ha prodotto una visione del mondo riduttiva. In: A. Colimberti ed. *Ecologia della Musica. Saggi sul Paesaggio Sonoro*. Roma, Donzelli, pp.79–99.

Barclay, L. (2015) *Biosphere Soundscapes* [Internet]. Available from:
<<http://www.biospheresoundscapes.org/>> [Accessed 3 December 2018].

Barnard, M. (2009) *Woche* (with apologies to Ruttman and Brock). [Internet]. Available from: <<https://soundcloud.com/mattt/woche-with-apologies-to-ruttman-and-brock>> [Accessed 3 December 2018].

Barthes, R. (1991) *The responsibility of forms*. Berkeley and Los Angeles, University of California Press.

- Basso, K.H. & Feld, Steven (1996) *Senses of place*. K. H. Basso & S. Feld eds. School of American Research Press.
- Basso, K.H. (1996) *Wisdom Sits in Places: Landscape and Language among the Western Apache*. Albuquerque, University of New Mexico Press.
- Beaumont-Thomas, B. (2014) Bjork's Biophilia becomes first app in New York's Museum of Modern Art. [Internet]. Available from:
<<https://www.theguardian.com/music/2014/jun/12/bjork-biophilia-first-app-museum-of-modern-art-new-york>>.
- Becker, C. (2009) *Thinking in Place: Art, Action, and Cultural Production*. Boulder, CO, Paradigm Publishers.
- Behrendt, F. (2015) Locative Media as Sonic Interaction Design: Walking through Placed Sounds. *Wi: Journal of Mobile Media*, 9 (2), pp.1–24.
- Behrendt, F. (2012) The sound of locative media. *Convergence: The International Journal of Research into New Media Technologies*, 18 (3), pp.283–295. Available from: <<http://con.sagepub.com/cgi/doi/10.1177/1354856512441150>> [Accessed 5 December 2014].
- Behrendt, F. (2010) Mobile sound: media art in hybrid spaces. University of Sussex.
- Benjamin, W. (1999) *The arcades project*. Cambridge, Harvard University Press.
- Benjamin, W. (1978) Surrealism: The Last Snapshot of the European Intelligentsia. *New Left Review*, 108, pp.47–56.
- Bennett, J. (2010) *Vibrant Matter: a political ecology of things*. Durham & London, Duke University Press.
- Berglund, B. & Nilsson, M.E. (2006) On a Tool for Measuring Soundscape Quality in Urban Residential Areas. , 92 (August), pp.938–944.
- Berrens, K. (2016) An emotional cartography of resonance. *Emotion, Space and Society*, 20, pp.75–81. Available from:
<<http://dx.doi.org/10.1016/j.emospa.2016.06.005>>.

- Berrens, K. (2015) *Ensounded bodies: making place in London's East End*.
Universitat Oberta Catalunya.
- Bickford, S. (1996) *The Dissonance of Democracy: Listening, Conflict and Citizenship*.
Ithaca & London, Cornell University Press.
- Bird, S.E. (2011) Are We All Producers Now? *Cultural Studies*, 25 (4–5), pp.502–516.
Available from:
<<http://www.tandfonline.com/doi/abs/10.1080/09502386.2011.600532>>
[Accessed 17 October 2014].
- Biserna, E. (2017) SoundBorderscapes : vers une écoute critique de la frontière.
antiAtlas Journal, 2. Available from: <<https://www.antiatlas-journal.net/02-soundborderscapes-vers-une-ecoute-critique-de-la-frontiere/>>.
- Biserna, E. (2015) Mediated Listening Paths : Breaking the Auditory Bubble. *Wi Journal of Mobile Media*, 9 (02). Available from: <<http://wi.mobilities.ca/elena-biserna-mediated-listening-paths-breaking-the-auditory-bubble>>.
- Blessner, B. & Salter, L.-R. (2007) *Spaces speak, are you listening?: experiencing aural architecture*. MIT press.
- Du Bois, W.E.B. (2006) Double-consciousness and the veil. In: et al. Acker, Joan ed.
Social class and stratification: classic statements and theoretical debates.
Rowman & Littlefield Publishers, pp.203–210.
- Bonta, M. & Protevi, J. (2004) *Deleuze and Geophilosophy a guide and glossary*.
- Born, G. (2016) Anthropology, digital music and the contemporary.
- Born, G. (2013) Introduction. In: G. Born ed. *Music, Sound and Space Transformations of Public and Private Experience*. Cambridge University Press, pp.1–70.
- Born, G. (2010a) For a Relational Musicology: Music and Interdisciplinarity, Beyond the Practice Turn. *Journal of the Royal Musical Association*, 135 (2), pp.205–243.
- Born, G. (2010b) Listening, Mediation, Event: Anthropological and Sociological Perspectives. *Journal of the Royal Musical Association*, 135 (sup1), pp.79–89.

- Born, G. (2010c) The Social and the Aesthetic: For a Post-Bourdieuian Theory of Cultural Production. *Cultural Sociology*, 4 (2), pp.1–38. Available from: <<http://cus.sagepub.com/cgi/doi/10.1177/1749975510368471>>.
- Born, G. (2005) On Musical Mediation: Ontology, Technology and Creativity. *Twentieth-Century Music*, 2 (01), pp.7–36. Available from: <http://www.journals.cambridge.org/abstract_S147857220500023X> [Accessed 17 October 2014].
- Bosma, H. (2016) Unsettling Performances, Soundwalks and Loudspeakers: Gender in Electroacoustic Music and Other Sounding Arts. In: M. Cobussen, V. Meelberg, & B. Truax eds. *The Routledge Companion to Sounding Art*. London, Routledge, pp.305–320.
- Bourdieu, P. (1977) *Outline of a Theory of Practice (translated by R. Nice)*. Cambridge, Cambridge University Press.
- Bourriaud, N. (2002) *Relational Aesthetics*. S. T. Pleasance, F. T. Woods, & M. T. Copeland eds. Les Presses du réel. Available from: <<http://books.google.com/books?id=GAxhQgAACAAJ&pgis=1>>.
- Boyd, Danah Michele (2008) Taken Out of Context: American Teen Sociality in Networked Publics. University of California, Berkeley. Available from: <<http://www.nejm.org/doi/abs/10.1056/NEJMcps0801308>>.
- Bradley, S. (2016) Archaeology of the Voice: Exploring Oral History, Locative Media, Audio Walks, and Sound Art as Site-Specific Displacement Activities. The University of Huddersfield.
- Braidotti, R. (2011) *Nomadic theory: the portable Rosi Braidotti*. Columbia University Press.
- Braidotti, R. & Hlavajova, M. (2018) *Posthuman Glossary*. London & New York, Bloomsbury Academic.
- Braun, B. & Whatmore, S.J. (2010) *Political Matter: Technoscience, Democracy and Public Life*. B. Braun & S. J. Whatmore eds. Minneapolis; London, University of Minnesota Press.

- Breton, A. & Witkovsky, M.S. (2003) Artificial Hells. Inauguration of the '1921 Dada Season". *October*, 105, pp.137–144. Available from: <<http://www.jstor.org/stable/3397688>>.
- Brighenti, A.M. (2010) New Media and the Prolongations of Urban Environments. *Convergence: The International Journal of Research into New Media Technologies*, 16 (4), pp.471–487. Available from: <<http://con.sagepub.com/cgi/doi/10.1177/1354856510375528>> [Accessed 5 December 2014].
- Brown, M. (2015) Ai Weiwei and Anish Kapoor lead London walk of compassion for refugees [Internet]. Available from: <<https://www.theguardian.com/uk-news/2015/sep/17/ai-weiwei-anish-kapoor-london-walk-refugees>> [Accessed 1 December 2018].
- Bruno, G. (2002) *Atlas of Emotion. Journeys in Art, Architecture, and Film*. New York, Verso.
- Bruns, A. (2006) Towards Prodisage: Futures for User-Led Content Production. In: C. Sudweeks, Fay and Hrachovec, Herbert and Ess ed. *Cultural Attitudes towards Communication and Technology*. Tartu, Estonia, pp.275–284. Available from: <<http://eprints.qut.edu.au>>.
- Bull, M. (2007) *Sound Moves: iPod culture and urban experience*. J. Urry ed. London; New York, Routledge.
- Bull, M. (2005a) Auditory. In: C. A. Jones ed. *Sensorium: Embodied Experience, Technology, and Contemporary Art*. Cambridge, MIT Press.
- Bull, M. (2005b) No Dead Air! The iPod and the Culture of Mobile Listening. *Leisure Studies*, 24 (4), pp.343–355. Available from: <<http://www.tandfonline.com/doi/abs/10.1080/0261436052000330447>> [Accessed 5 December 2014].
- Bull, M. (2004) Thinking about sound, proximity, and distance in Western experience: The case of Odysseus's Walkman. In: V. Erlmann ed. *Hearing cultures: Essays on sound, listening and modernity*. Berg, pp.173–190.

- Bull, M. (2000) *Sounding out the city: Personal stereos and the management of everyday life*. Berg.
- Bull, M. & Back, L. (2016) *The Auditory Culture Reader*. M. Bull & L. Back eds. London & New York, Bloomsbury Academic.
- Butler, T. (2006) A walk of art: the potential of the sound walk as practice in cultural geography. *Social & Cultural Geography*, 7 (6), pp.889–908. Available from: <<http://www.tandfonline.com/doi/abs/10.1080/14649360601055821>> [Accessed 5 December 2014].
- Caillois, R. (2001) *Man, play, and games*. University of Illinois Press.
- Cain, R., Jennings, P., Adams, M., Bruce, N., Carlyle, A., Cusack, P., Davies, William, J., Hume, K. & Plack, C. (2008) SOUND-SCAPE: A framework for characterising positive urban soundscapes. *Eaa 2008*, pp.5507–5510.
- Calvino, I. (1974) *Invisible Cities*. Trans. Wil. New York, Harcourt Brace Jovanovich.
- Cardiff, J. (2004) Her Long Black Hair [Internet]. Available from: <<http://www.cardiffmiller.com/artworks/walks/longhair.html>> [Accessed 3 December 2018].
- Carpenter, E. & McLuhan, M. (1960) Acoustic Space. In: E. Carpenter & M. McLuhan eds. *Explorations in Communication*. Boston, Beacon Press.
- Carpiano, R.M. (2009) Come take a walk with me: The “Go-Along” interview as a novel method for studying the implications of place for health and well-being. *Health & Place*, 15 (1), pp.263–272.
- Casey, E.S. (1997) *The Fate of Place: A Philosophical History*. University of California Press.
- Casey, E.S. (1996) How to get from space to place in a fairly short stretch of time: Phenomenological prolegomena. In: K. H. Basso & S. Feld eds. *Senses of Place*. School of American Research Press, pp.14–51.
- Ceraso, S. (2010) The Sight of Sound: Mapping Audio [Internet]. Available from: <<https://www.hastac.org/blogs/stephceraso/2010/10/05/sight-sound->

mapping-audio>.

De Certeau, M. (1984) *The Practice of Everyday Life*.

De Certeau, M. & Rendall, S. (trans.) (1984) *The Practice of Everyday Life*. Berkeley, University of California Press.

Charitos, D. (2007) Locative Media and their Impact on Social Interaction within Contemporary Urban Space. *Issues of Communication*, 5.

Chatwin, B. (1987) *The Songlines*. New York, Penguin Books.

Chilasa, B. (2012) *Indigenous Research Methodologies*. New York, Sage.

Chion, M. (1994) The Three Listening Modes. *The Sound Studies Reader*, pp.48–53.

Clifford, J. & Marcus, G.E. (1986) *Writing culture: the poetics and politics of ethnography: a School of American Research advanced seminar*. Chicago, University of California Press.

Cobussen, M., Meelberg, V. & Truax, B. (2016) General introduction. In: M. Cobussen, V. Meelberg, & B. Truax eds. *The Routledge Companion to Sounding Art*. London, Routledge, pp.1–27. Available from:
<<http://ebooks.cambridge.org/ref/id/CBO9781139020503A011>>.

Cole, S.J. (2011) The Prosumer and the Project Studio: The Battle for Distinction in the Field of Music Recording. *Sociology*, 45 (3), pp.447–463. Available from:
<<http://soc.sagepub.com/cgi/doi/10.1177/0038038511399627>> [Accessed 3 November 2014].

Coleman, S. & Collins, P. (2006) *Locating the Field: Space, Place and Context in Anthropology*. New York, Berg.

Conley, V.A. (2012) *Spatial Ecologies: Urban sites, state and world-space in French cultural theory*. Liverpool, Liverpool University Press.

Connor, S. (2004) Edison's Teeth: Touching Hearing. In: V. Erlmann ed. *Hearing cultures: Essays on sound, listening, and modernity*. Berg, pp.153–172.

Connor, S. (1997) The modern auditory I. In: R. Porter ed. *Rewriting the Self*:

- Histories from the Renaissance to the Present*. London & New York, Routledge, pp.203–223.
- Corbin, A. (1998) *Village Bells: Sound and Meaning in the Nineteenth-Century French Countryside*. M. (trans) Thom ed. New York, Columbia University Press.
- Coulam, D. Paris Sound Map [Internet]. Available from:
<<http://www.soundlandscapes.eu/home>> [Accessed 3 December 2018].
- Couldry, N. (2011) More sociology, more culture, more politics. *Cultural Studies*, 25 (4–5), pp.487–501.
- Cox, C. (2018) Sonic Realism and Auditory Culture: A Reply to Marie Thompson and Annie Goh. *Parallax*, 24 (2), pp.234–242. Available from:
<<https://doi.org/10.1080/13534645.2018.1452448>>.
- Cox, C. (2011) Beyond representation and signification: Toward a sonic materialism. *Journal of Visual Culture*, 10 (2), pp.145–161.
- Cox, T. (2010) Sound Tourism for Travellers [Internet]. Available from:
<<http://www.sonicwonders.org/>> [Accessed 3 December 2018].
- Coyne, R. (2015) How geometry aids recollection [Internet]. Available from:
<<https://richardcoyne.com/2015/07/18/how-geometry-aids-recollection/#more-8770>> [Accessed 11 October 2018].
- Coyne, R. (2010) *The tuning of place: sociable spaces and pervasive digital media*. The MIT Press.
- Coyne, R. (2009) Interpretative communities as decisive agents: on pervasive digital technologies. *arq: Architectural Research Quarterly*, 13 (02), pp.127–132.
- Craig, A. Glasgow 3D Sound Map [Internet]. Available from:
<<http://www.glasgow3dsoundmap.co.uk/>> [Accessed 3 December 2018].
- Cubitt, S. (2007) Media art futures. *Futures*, 39 (10), pp.1149–1158. Available from:
<<http://linkinghub.elsevier.com/retrieve/pii/S0016328707000766>>
[Accessed 3 November 2014].

- Daniel, D. (2011) "All Sound Is Queer". *The Wire*, (333).
- Davey, N. (2016) Gadamer's Aesthetics. *The Stanford Encyclopedia of Philosophy*.
Available from: <<https://plato.stanford.edu/entries/gadamer-aesthetics/>>
[Accessed 3 December 2018].
- Davies, W.J., Adams, M., Bruce, N., Marselle, M., Cain, R., Jennings, P., Poxon, J., Carlyle, A., Cusack, P., Hall, D., Irwin, A., Hulme, K. & Plack, C. (2009) The positive soundscape project: a synthesis of results from many disciplines. Available from: <<http://usir.salford.ac.uk/2106/>>.
- Davies, W.J., Adams, M., Bruce, N.S., Cain, R., Carlyle, A., Cusack, P., Hume, K., Jennings, P. & Plack, C. (2007) The positive soundscape project. , (August 2015). Available from: <<http://usir.salford.ac.uk/2460/>>.
- Debord, G. (1958) Theory of the Dérive. *Internationale Situationniste*, 2, pp.50–54.
- Deleuze, G. & Guattari, F. (1987) *A Thousand Plateaus: Capitalism and Schizophrenia*. B. (trans) Massumi ed. Minneapolis; London, University of Minnesota Press.
Available from: <<http://www.jstor.org/stable/203963?origin=crossref>>.
- Denil, M. (2012) A Disquisition on Cartographic Style and Taste: with Attendant Remarks upon Aesthetics, Clarity, Design, and Mapicity. [Internet]. Available from:
<<http://www.cartographicperspectives.org/index.php/journal/article/view/cp73-denil/753>> [Accessed 3 December 2018].
- DeNora, T. (2013) *Music Asylums: Wellbeing through music in everyday life*. Farnham, UK, Ashgate Publishing, Ltd.
- Denzin, N.K. (2003) *Performance ethnography: Critical pedagogy and the politics of culture*. SAGE.
- Dillane, A. (2013) Limerick Soundscapes [Internet]. Available from:
<<https://www.ul.ie/engage/node/1801>> [Accessed 3 December 2018].
- Drever, J.L. (2017) Soundwalking: Aural excursions into the everyday. In: J. Saunders ed. *The Ashgate Research Companion to Experimental Music*. Routledge, pp.181–

210. Available from: <<http://eprints.gold.ac.uk/7836/>>.
- Drever, J.L. (2011) Soundwalking in the City : a socio-spatio-temporal sound practice. *5th International Symposium on Temporal Design*, (July), pp.21–22.
- Droumeva, M. (2017) Soundmapping as critical cartography: Engaging publics in listening to the environment. *Communication and the Public*. Available from: <<http://journals.sagepub.com/doi/10.1177/2057047317719469>>.
- Droumeva, M. (2015) Sensory postcards: Using mobile media for digital ethnographies. *ethnographymatters.net*. Available from: <<http://ethnographymatters.net/blog/2015/06/29/sensory-postcards-using-mobile-media-for-digital-ethnographies>>.
- Duncum, P. (2011) Youth on YouTube: Prosumers in a Peer-to-Peer Participatory Culture. *International Journal of Arts Education*, 9 (2), pp.24–39. Available from: <http://ed.artegov.tw/uploadfile/periodical/3052_9-2-p.24-39.pdf> [Accessed 12 November 2014].
- Edmonds, E. (2007) Transactions. *Leonardo*, pp.362–374.
- Elshtain, J.B. (1981) Public man, private women. In: *Women in Social and Political Thought*. Princeton.
- Emerson, R. (2001) *Contemporary Field Research: Perspectives and Formulations*. Second. Prospect Heights, IL, Waveland Press.
- Erlmann, V. (2004) Hearing Cultures. *Human Evolution*, p.239. Available from: <<http://books.google.co.uk/books?id=wRdj0p0BpBIC>>.
- Evans, J. & Jones, P. (2011) The walking interview: Methodology, mobility and place. *Applied Geography*, 31 (2), pp.849–858. Available from: <<http://dx.doi.org/10.1016/j.apgeog.2010.09.005>>.
- Falzon, M.-A. (2009) *Multisited Ethnography. Theory, Praxis, and Locality in Contemporary Research*.
- Featherstone, M. (1990) *Global culture: Nationalism, globalization and modernity (Vol. 2)*. SAGE.

- Feld, S. (2015) *Acoustemology*. D. Novak & M. Sakakeeny eds. Durham, Duke University Press.
- Feld, S. (2012) *Sound and Sentiment. Birds, Weeping, Poetics, and Song in Kaluli Expression*. Durham & London, Duke University Press.
- Feld, S. (1996) Waterfalls of Song: An Acoustemology of Place Resounding in Bosavi, Papua New Guinea. In: S. Feld & K. Basso eds. *Senses of Place*. Santa Fe, NM, School of American Research Press, pp.91–135.
- Feld, S. (1994) From ethnomusicology to echo-muse-ecology: Reading R. Murray Schafer in the Papua New Guinea rainforest. *The Soundscape Newsletter*, 8.
- Feld, S. (1987) Dialogic editing: Interpreting how Kaluli read sound and sentiment. *Cultural Anthropology*, 2 (2), pp.190–210. Available from:
<<http://onlinelibrary.wiley.com/doi/10.1525/can.1987.2.2.02a00020/full%5Cnpapers3://publication/uuid/AC8B67D0-D534-4D7F-99DB-D520AE5D5B68>>.
- Feld, S. & Brenneis, D. (2004) Doing anthropology in sound. *American Ethnologist*, 31 (4), pp.461–474. Available from:
<<http://doi.wiley.com/10.1525/ae.2004.31.4.461>>.
- Fink, E. (1968) The Oasis of Happiness : Toward an Ontology of Play. , (41), pp.19–30.
- Foucault, M. (1991) *Discipline and Punish. The birth of the prison*. A. (trans) Sheridan ed. London, Penguin Books.
- Foucault, M. (1986) Of other spaces: Utopias and Heterotopias (translated by Jay Miskowiec). *diacritics*, 16 (1), pp.22–27.
- Foucault, M. (1983) Afterword: The subject and power. In: H. L. Dreyfus & P. Rabinow eds. *Michel Foucault: Beyond structuralism and hermeneutics*. Chicago, Chicago University Press.
- Fowkes, S. (2014) Cities and Memory [Internet]. Available from:
<<https://citiesandmemory.com>> [Accessed 3 December 2018].
- Gadamer, H.-G. (1986) *The relevance of the beautiful and other essays*. Cambridge

University Press.

Gadamer, H.-G. (1975) *Truth and Method*. J. W. (trans) ed. New York, Seabury Press.

Gallagher, M. (2016) Sound as affect: Difference, power and spatiality. *Emotion, Space and Society*, 20, pp.42–48. Available from:
<<http://dx.doi.org/10.1016/j.emospa.2016.02.004>>.

Gallagher, M. (2015a) Field recording and the sounding of spaces. , 33 (1), pp.560–576.

Gallagher, M. (2015b) Listening, meaning and power. In: A. Carlyle & C. Lane eds. *On listening*. Uniformbooks, pp.41–44.

Gallagher, M. (2014) Sounding ruins: reflections on the production of an ‘audio drift’. *Cultural Geographies*. Available from:
<<http://cgj.sagepub.com/cgi/doi/10.1177/1474474014542745>>.

Gallagher, M., Kanngieser, A. & Prior, J. (2017) Listening geographies. *Progress in Human Geography*, 41 (5), pp.618–637. Available from:
<<http://journals.sagepub.com/doi/10.1177/0309132516652952>>.

Galloway, A. (2004) Intimations of everyday life: Ubiquitous computing and the city. *Cultural Studies*, 18 (2–3), pp.384–408. Available from:
<<papers3://publication/uuid/C4540A52-19CD-4C3D-B3A0-C829AC63FE5C>>.

Garrett, M. (2014) DIWO (Do-It-With-Others): Artistic Co-Creation as a Decentralized Method of Peer Empowerment in Today’s Multitude. [Internet]. Available from: <<https://marcgarrett.org/2014/02/12/diwo-do-it-with-others-artistic-co-creation-as-a-decentralized-method-of-peer-empowerment-in-todays-multitude/#comments>> [Accessed 20 June 2018].

Gaye, L., Mazé, R. & Holmquist, L. (2003) Sonic city: the urban environment as a musical interface. *Proceedings of the 2003 Conference on New Interfaces for Musical Expression (NIME-03)*, pp.109–115. Available from:
<<http://dl.acm.org/citation.cfm?id=1085741>>.

Geertz, C. (1994) Thick description: Toward an interpretive theory of culture. In: M.

- Martin & L. McIntyre eds. *Readings in the philosophy of social science*. Cambridge, Mass. ; London, MIT Press, pp.213–231.
- Gerlach, J. (2014) Lines, contours and legends: Coordinates for vernacular mapping. *Progress in Human Geography*, 38 (1), pp.22–39.
- Goehr, L. (2008) *Elective Affinities. Musical Essays on the History of the Aesthetic Theory*. New York, Columbia University Press.
- Goh, A. (2017) Sounding Situated Knowledges: Echo in Archaeoacoustics. *Parallax*, 23 (3), pp.283–304. Available from: <<http://doi.org/10.1080/13534645.2017.1339968>>.
- Goodman, S. (2009) *Sonic Warfare*. Cambridge, Massachusetts & London, England, The MIT Press. Available from: <<http://ciudadtecnicolor.files.wordpress.com/2010/08/0262013479-affecta.pdf>>.
- Goodman, S. (2012) The ontology of vibrational force. In: J. Sterne ed. *The Sound Studies Reader*. Routledge, pp.70–72.
- Gopinath, S.S. & Stanyek, J. eds. (2014) *The Oxford handbook of mobile music studies. Volume 2*. Oxford, UK, Oxford University Press.
- Graham, S. (2004) Beyond the ‘dazzling light’: from dreams of transcendence to the ‘remediation’ of urban life . *New Media and Society*, 6 (1), pp.16–25.
- Gupta, A. & Ferguson, J. (1992) Beyond “culture”: Space, identity, and the politics of difference. *Cultural Anthropology*, 7 (1), pp.6–23.
- Hall, T., Lashua, B. & Coffey, A. (2008) Sound and the Everyday in Qualitative Research. *Qualitative Inquiry*, 14 (6), pp.1019–1040. Available from: <<http://qix.sagepub.com/cgi/doi/10.1177/1077800407312054>> [Accessed 5 December 2014].
- Haraway, D. (1988) Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies*, 14 (3), p.575. Available from: <<http://www.jstor.org/stable/3178066?origin=crossref>>.

- Harrison, P. & Anderson, B. (2012) *Taking-Place: Non-Representational Theories and Geography: Non-Representational Theories and Geography*. B. (Eds. . Harrison, P., & Anderson ed. Ashgate Publishing, Ltd. Available from:
<<http://books.google.ca/books?id=72Oy-lpPNQIC>>.
- Hay, J. & Couldry, N. (2011) Rethinking convergence/culture: an introduction. *Cultural Studies*, 25 (4–5), pp.473–486.
- Helmreich, S. (2010) Listening Against Soundscapes. *Anthropology News*, 51 (9), p.10.
- Hendy, D. (2013) Noise: A Human History of Sound and Listening. , p.402.
- Henriques, J. (2011) *Sonic Bodies: Reggae Sound Systems, Performance Techniques, and Ways of Knowing*. New York, Continuum.
- Heuson, J. (2011) Hearing the Hills: An Acoustic Encounter with South Dakota's Black Hills [Internet]. Available from:
<<http://sensatejournal.com/2011/03/jen-heuson-hearing-the-hills/>>
[Accessed 13 June 2018].
- Hirsch, E. & O'Hanlon, M. (1995) *The anthropology of landscape: Perspectives on place and space*. *Oxford Studies in Social and Cultural Anthropology*. E. Hirsch & M. O'Hanlon eds. Oxford, UK, Oxford University Press.
- Holmes, D.R. & Marcus, G.E. (2008) Collaboration Today and the Re-Imagination of the Classic Scene of Fieldwork Encounter. *Collaborative Anthropologies*, 1 (1), pp.81–101.
- hooks, b. (2009) *Belonging. A Culture of Place*. New York & London, Routledge.
- hooks, b. (1994) *Outlaw culture. Resisting representations*. Routledge.
- Hsu, W. (2012) On Digital Ethnography: mapping as a mode of data discovery (2 of 4). *ethnographymatters.net*. Available from:
<<http://ethnographymatters.net/blog/2012/12/05/on-digital-ethnography-mapping-as-a-mode-of-data-discovery-part-2-of-4/>>.
- Hughes, C. & Lury, C. (2013) Re-turning feminist methodologies: From a social to an

- ecological epistemology. *Gender and Education*, 25 (6), pp.786–799.
- Huron, A. (2015) Working with Strangers in Saturated Space: Reclaiming and Maintaining the Urban Commons. *Antipode*, 47 (4), pp.963–979.
- Ihde, D. (2016) Sound Beyond Sound. In: M. Cobussen, V. Meelberg, & B. Truax eds. *The Routledge Companion to Sounding Art*. London, Routledge, pp.205–212.
- Ihde, D. (2009) *Postphenomenology and Technoscience: The Peking University Lectures*. Available from:
 <<http://books.google.com/books?hl=en&lr=&id=8D7F-JDEoXMC&oi=fnd&pg=PR3&dq=postphenomenology+and+technoscience&ots=nDecHYvXEM&sig=CfdCBsNkrpwztyUj-cYw57K2hYI>>.
- Ihde, D. (2007) *Listening and Voice: Phenomenologies of Sound*. 2nd ed. State University of New York Press.
- Ihde, D. (1990) *Technology and the lifeworld: From garden to earth*. Indiana University Press.
- Ikoniadou, E. (2014) Abstract Time and Affective Perception in the Sonic Work of Art. *Body & Society*, 20 (3–4), pp.140–161. Available from:
 <<http://bod.sagepub.com/cgi/doi/10.1177/1357034X14546056>> [Accessed 11 November 2014].
- Ingold, T. (2007a) Against soundscape. *Autumn leaves: Sound and the environment in ...*, pp.10–13. Available from: <<http://lajunkielovegun.com/AcousticEcology-11/AgainstSoundscape-AutumnLeaves.pdf>> [Accessed 13 January 2015].
- Ingold, T. (2007b) *Lines: A Brief History*. Taylor & Francis.
- Ingold, T. (2000) *The perception of the environment: essays on livelihood, dwelling and skill*. London, UK, Routledge.
- Ingold, T. & Vergunst, J.L. (Eds.) . (2008) *Ways of walking: Ethnography and practice on foot*. Ashgate Publishing, Ltd.
- Jenkins, H. (2009) *Confronting the challenges of participatory culture. Media Education for the 21st Century*. Cambridge, MA: MIT Press. Available from:

<<http://www.citeulike.org/group/3697/article/2180075>> [Accessed 12 November 2014].

Jenkins, H. (2006) *Convergence culture: Where old and new media collide*. NYU press.

Johnston, C. (2012) The lovers: On the great wall and beyond. *Performance Research*, 17 (5), pp.19–23.

Kahn, D. (1999) *Noise, Water, Meat. A History of Sound in the Arts*. MIT Press.

Kane, B. (2015) Sound studies without auditory culture: a critique of the ontological turn. *Sound Studies*, 1 (1), pp.2–21. Available from:
<<https://www.tandfonline.com/doi/full/10.1080/20551940.2015.1079063>>.

Kane, B. (2014) *Sound Unseen: Acousmatic Sound in Theory and Practice*. New York, Oxford University Press. Available from:
<<http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780199347841.001.0001/acprof-9780199347841-chapter-8%5Cnpapers3://publication/doi/10.1093/acprof:oso/9780199347841.003.0008>>.

Kane, B. (2012) Musicophobia, or Sound Art and the Demands of Art Theory. *Nonsite.Org*, 8, pp.1–18. Available from:
<<http://nonsite.org/article/musicophobia-or-sound-art-and-the-demands-of-art-theory>>.

Kearney, M. (1995) The local and the global: The anthropology of globalization and transnationalism. *Annual review of anthropology*, pp.547–56.

Kelly, K.A. (2003) *Domestic violence and the politics of privacy*. Cornell University Press.

Kelman, A.Y. (2010) Rethinking the soundscape: A critical genealogy of a key term in sound studies. *The Senses and Society*, 5 (2), pp.212–234.

Kenins, L. (2013) Escapists and Jet-Setters: Residencies and Sustainability. *C Magazine, The Visual Arts Foundation*, (119), p.8.

Kim-Cohen, S. (2009) *In the blink of an ear: Toward a non-cochlear sonic art*. New

- York; London, Continuum. Available from: <http://www.kim-cohen.com/Assets/CourseAssets/Texts/Kim-Cohen_In The Blink Of An Ear_Chap.8.pdf>
 8.pdf%5Cnhttp://books.google.com/books?hl=en&lr=&id=w7ymURTH9nAC&oi=fnd&pg=PR5&dq=In+the+Blink+of+an+Ear.+Toward+a+Non-Cochlear+Sonic+Art&ots=ag6NMNAZGZ&sig=LPIMzMQ_>.
- Kirisits, N., Behrendt, F., Gaye, L. & Tanaka, A. (2008) *Creative Interactions --- The Mobile Music Workshops 2004--2008*. Die Angewandte Press. Available from: <<http://eprints.brighton.ac.uk/id/eprint/12482>>.
- Kitchin, R. & Dodge, M. (2007) Rethinking maps. *Progress in Human Geography*, 31 (3), pp.331–344.
- Kluitenberg, E. (2006) The Network of Waves Living and Acting in a Hybrid Space. *Open*, 11.
- Koutsomihalis, M. & Rodousakis, N. (2015) From (Not -) Doing- It - Yourself to Doing- It - (Cheaper) -With-Others. In: I. Theona & Di. Charitos eds. *HYBRID CITY 2015 / DATA TO THE PEOPLE*. Athens, Spatial Media Research Group, pp.40–48.
- Krygier, J. (2008) Making Maps with Sound [Internet]. Available from: <<https://makingmaps.net/2008/03/25/making-maps-with-sound/>> [Accessed 3 December 2018].
- Kubisch, C. (2004) Electrical Walks | Electromagnetic Investigations in the City [Internet]. Available from: <http://www.christinakubisch.de/en/works/electrical_walks> [Accessed 3 December 2018].
- Kunreuther, L. (2018) Sounds of Democracy: Performance, Protest, and Political Subjectivity. *Cultural Anthropology*, 33 (1), pp.1–31. Available from: <<https://culanth.org/articles/932-sounds-of-democracy-performance-protest-and>>.
- Kunreuther, L. (2017) Democratic Soundscapes. *The Avery Review*, (21), pp.17–28.

- Kusenbach, M. (2003) Street Phenomenology. The go-along as ethnographic research tool. *Ethnography*, 4 (3), pp.455–485. Available from: <<http://eth.sagepub.com/content/4/3/455.abstract%5Cnhttp://eth.sagepub.com/cgi/doi/10.1177/146613810343007>>.
- LaBelle, B. (2018) *Sonic Agency: Sound and Emergent Forms of Resistance*. London, Goldsmiths Press.
- LaBelle, B. (2016) Restless acoustics, emergent publics. In: M. Cobussen, V. Meelberg, & B. Truax eds. *The Routledge Companion to Sounding Art*. London, Routledge, pp.275–286.
- LaBelle, B. (2012) On Listening [Internet]. Available from: <<https://b-post.no/en/12/labelle.html>> [Accessed 5 December 2018].
- LaBelle, B. (2010) *Acoustic territories: Sound culture and everyday*. A&C Black.
- LaBelle, B. (2006) *Background Noise. Perspectives on Sound Art*. New York; London, Continuum.
- Lacey, J. (2016) Sonic Placemaking: Three approaches and ten attributes for the creation of enduring urban sound art installations. *Organised Sound*, 21 (02), pp.147–159. Available from: <http://www.journals.cambridge.org/abstract_S1355771816000078>.
- Lacey, J. (2014) Site-Specific Soundscape Design for the Creation of Sonic Architectures and the Emergent Voices of Buildings. *Buildings*, 4, pp.1–24. Available from: <www.mdpi.com/journal/buildings/>.
- Lander, D. (2011) Future Physical: The Creative User and the theme of response-ABILITY. In: M. Rieser ed. *The Mobile Audience: Media Art and Mobile Technologies*. Amsterdam; New York, Rodopi, pp.163–179.
- Landy, L. (2011) Sound-based music 4 all. In: R. T. Dean ed. *The Oxford Handbook of Computer Music*. New York ; Oxford, Oxford University Press, pp.1–21.
- Landy, L. (2007a) *La musique des sons/The Music of Sounds*. Paris, Sorbonne MINT/OMF.

- Landy, L. (2007b) *Understanding the Art of Sound Organization*. Cambridge, MIT Press.
- Lane, C. & Carlyle, A. (2013) *In the field : the art of field recording*. Axminster, Uniformbooks.
- Langer, S. (1953) *Feeling and Form: A Theory of Art Developed from Philosophy in a New Key*. New York, Scribners.
- Lappin, S. & Ouzounian, G. (2015) Sonic Places: In Conversation with Peter Cusack. *Journal of Sonic Studies*, 11. Available from:
<<https://www.researchcatalogue.net/view/236026/236027/0/0>>.
- Lashua, B., Cohen, S. & Schofield, J. (2010) Popular music, mapping, and the characterization of Liverpool. *Popular Music History*, 4 (2), pp.126–144.
Available from: <<http://www.equinoxjournals.com/PMH/article/view/9807>>.
- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford, Oxford University Press.
- Latour, B. (1999) *Pandora's Hope: Essays on the Reality of Science Studies*. Cambridge, Mass, Harvard University Press.
- Leadley, M. (2012) Hidden Sounds of Whitstable [Internet]. Available from:
<<https://soundcloud.com/marcus-leadley/hidden-sounds-of-whitstable>>
[Accessed 3 December 2018].
- Lefebvre, H. (2004) *Rhythmanalysis: Space, time and everyday life*.
- Lefebvre, H. (1991) The Production of Space [Internet]. Available from:
<[http://www.healthcity2013.be/psaa2013/sites/default/files/shared space/Burak/lefebvre_production_space\[1\].pdf](http://www.healthcity2013.be/psaa2013/sites/default/files/shared%20space/Burak/lefebvre_production_space[1].pdf)> [Accessed 28 October 2014].
- Locus Sonus (2006) Locustream SoundMap [Internet]. Available from:
<<http://locusonus.org/soundmap/051/>> [Accessed 3 December 2018].
- Loock, U. (2005) Times Square Max Neuhaus' s Sound Work in New York City. , pp.1–7.

- Lorde, A. (1978) Uses of the Erotic: The Erotic as Power. *Sister Outsider*, pp.53–59.
Available from:
<[http://ucblibraries.colorado.edu/circulation/ereserves/pdfs/courses/SPRING 2009/ENGL 4287, GARRITY/ON COURSE NOW/USES OF THE EROTIC.pdf](http://ucblibraries.colorado.edu/circulation/ereserves/pdfs/courses/SPRING%2009/ENGL%204287,GARRITY/ON%20COURSE%20NOW/USES%20OF%20THE%20EROTIC.pdf)&http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Uses+of+the+Erotic:+The+Erotic+as+Power#0>.
- Lorimer, H. (2005) Cultural geography : the busyness of being ' more-than-representational '. *Progress in Human Geography*, 29 (1), pp.83–94. Available from: <<http://eprints.gla.ac.uk/15268/>>.
- Lorimer, H. & Wylie, J. (2010) LOOP (a geography) LOOP (a geography). *Performance Research*, 15, pp.6–13.
- Lynch, K. (1960) *The image of the city*. Vol. 11. MIT press.
- Macdonald, S. & Basu, P. (2007) Experiments in Exhibition, Ethnography, Art, and Science. In: S. Macdonald & P. Basu eds. *Exhibition Experiments*. Oxford, UK, Blackwell, pp.1–24.
- Macedo, F. (2015) Investigating Sound in Space: Five meanings of space in music and sound art. *Organised Sound*, 20 (02), pp.241–248. Available from: <http://www.journals.cambridge.org/abstract_S1355771815000126>.
- Maes, L. & Leman, M. (2016) DEFINING SOUND ART. In: M. Cobussen, V. Meelberg, & B. Truax eds. *The Routledge Companion to Sounding Art*. London, Routledge, pp.27–40.
- Malina, F.J. & Schaeffer, P. (1972) A Conversation on Concrete Music and Kinetic Art. *Leonardo*, 5 (3), pp.255–260.
- Mangaoang, A. & Flynn, J.O. (2016) Mapping Popular Music in Dublin : Executive Report l. , p.58. Available from: <https://www.academia.edu/26097307/Mapping_Popular_Music_in_Dublin_Executive_Report>.
- Marcus, G.E. (2013) Experimental forms for the expression of norms in the ethnography of the contemporary. *HAU: Journal of Ethnographic Theory*, 3 (2),

pp.197–217.

Marcus, G.E. (2012) The Legacies of Writing Culture and the near future of the ethnographic form: a sketch. *Cultural Anthropology*, 27 (3), pp.427–445.
Available from: <<http://doi.wiley.com/10.1111/j.1548-1360.2012.01152.x>>.

Marcus, G.E. (2010) Contemporary Fieldwork Aesthetics in Art and Anthropology: Experiments in Collaboration and Intervention. *Visual Anthropology*, 23 (4), pp.263–277.

Marcus, G.E. (1995) Marcus-Etnography in/of the World System: The Emergence of Multi-Sited Ethnography. *Annual Review of Anthropology*, 24, pp.95–117.

Massey, D.B. (2005) *For Space*. London, SAGE. Available from:
<<http://www.amazon.co.uk/dp/1412903629>>.

Massey, D.B. (1994) *Space, Place and Gender*. Minneapolis, University of Minnesota Press.

Massey, D.B. (1993) Power Geometry and a Progressive Sense of Place. In: & L. T. (Eds. . J. Bird, B. Curtis, T. Putnam, G. Robertson ed. *Mapping the Futures: Local Cultures, Global Change*. New York, NY, Routledge, pp.60–70.

Massumi, B. (2002a) Concrete Is as Concrete Doesn't. In: *Parables of the Virtual: Movement, Affect, Sensation*. Duke University Press, pp.1–23. Available from:
<<http://www.brianmassumi.com/textes/Introduction.pdf>>.

Massumi, B. (2002b) *Parables for the virtual: Movement, affect, sensation*. Duke University Press.

McCartney, A. (2014) Soundwalking: Creating Moving Environmental Sound Narratives. In: S. Gopinath & J. Stanyek eds. *The Oxford Handbook of Mobile Music Studies, Volume 2*. New York, Oxford University Press, pp.212–237.
Available from:
<<http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199913657.001.0001/oxfordhb-9780199913657-e-008>>.

McCartney, A. & Paquette, D. (2012a) Research in Brief. Soundwalking and the

- Bodily Exploration of Places. *Canadian Journal of Communication*, 37 (1), pp.135–145.
- McCartney, A. & Paquette, D. (2012b) Walking, listening, speaking. The soundwalking interactions project. In: *Ambiances in action / Ambiances en acte(s) - International Congress on Ambiances*. Montreal, Canada, pp.189–194.
- McCartney, A. (2010) Soundwalking Interactions [Internet]. Available from: <<https://soundwalkinginteractions.wordpress.com>> [Accessed 3 December 2018].
- McDowell, L. (1999) *Gender, identity and place: Understanding feminist geographies*. Minneapolis, University of Minnesota Press.
- McKee, a. (2013) The power of art, the power of entertainment. *Media, Culture & Society*, 35 (6), pp.759–770. Available from: <<http://mcs.sagepub.com/cgi/doi/10.1177/0163443713491518>> [Accessed 26 October 2014].
- McLuhan, M. (2004) Visual and acoustic space. In: C. Cox & D. Warner eds. *Audio Culture*. New York, Continuum, pp.67–72.
- McLuhan, M., Gordon, W.T., Lamberti, E. & Scheffel-Dunand, D. (2011) *The Gutenberg galaxy: The making of typographic man*. University of Toronto Press.
- McNamara, K. (2011) The paparazzi industry and new media: the evolving production and consumption of celebrity news and gossip websites. *International Journal of Cultural Studies*, 14 (5), pp.515–530.
- Mechtley, B., Cook, P. & Spanias, A. (2013) Sound Mapping on the Web: Current Solutions and Future Directions. *Proceedings of the Symposium on Acoustic Ecology*.
- Merleau-Ponty, M. (1962) *Phenomenology of Perception [Phénoménologie de la Perception]*. Routledge & Kegan Paul.
- Mignot, D. (1989) Two times and individual experience. , pp.175–7.
- Miller, D. (2005) Materiality: An Introduction. In: D. Miller ed. *Materiality*. London,

Duke University Press.

Miyazaki, H. (2016) Collaboration. The Biennial Meeting of the Society for Cultural Anthropology [Internet]. Available from: <<https://culanth.org/fieldsights/744-cfp-collaboration-the-biennial-meeting-of-the-society-for-cultural-anthropology>> [Accessed 2 December 2018].

Mouffe, C. (2008) Art and Democracy: Art as an Agnostic Intervention in Public Space. *Open*, 14 (14), pp.6–15.

Mouffe, C. (2000) *The democratic paradox*. Verso.

Mujezinovic, D. (2018) Audio Quality Has A Significant Impact On Whether People Believe What They Are Hearing, New Study Shows. [Internet]. Available from: <<https://www.inquisitr.com/4866286/audio-quality-has-a-significant-impact-on-whether-people-believe-what-they-are-hearing-new-study-shows/>> [Accessed 3 December 2018].

Myers, M. (2011a) Vocal Landscaping: The Theatre of Sound in Audiowalks. In: L. Kendrick & D. Roesner eds. *Theatre Noise: The Sound of Performance*. Newcastle upon Tyne, Cambridge Scholars Publishing, pp.70–81.

Myers, M. (2011b) Walking Again Lively: Towards an Ambulant and Conversive Methodology of Performance and Research. *Mobilities*, 6 (2), pp.183–201.

Napoli, P.M. (2011) *Audience Evolution: New Technologies and the Transformation of Media Audiences*. New York, USA, Columbia University Press.

National Library of Scotland (2016) Scotland's Sounds [Internet]. Available from: <<http://scotlands-sounds.nls.uk/>> [Accessed 3 December 2018].

Nature Soundmap Nature Soundmap [Internet]. Available from: <<http://www.naturesoundmap.com>> [Accessed 3 December 2018].

Nelson, P. (2015) The Materiality of Space. *Organised Sound*, 20 (3), pp.323–330.

Neuhaus, M. (1974) BANG, BOOooom, ThumP. EEEK, tinkle. *New York Times*, p.39.

Neumark, N. (2016) Mapping sounding art: Affect, place, memory. In: M. Cobussen,

- V. Meelberg, & B. Truax eds. *The Routledge Companion to Sounding Art*. London, Routledge, pp.383–392.
- Newman, E.J. & Schwarz, N. (2018) Good Sound, Good Research: How Audio Quality Influences Perceptions of the Research and Researcher. *Science Communication*, 40 (2). Available from: <<https://doi.org/10.1177/1075547018759345>>.
- Nicklin, H. (2017) Sounding out the city. *Performance and Civic Engagement*, pp.135–158.
- Noll, U. (2006) Radio Aporee [Internet]. Available from: <<https://aporee.org/maps/>> [Accessed 3 December 2018].
- Nowotny, H., Scott, P. & Gibbons, M. (2003) ‘Mode 2’ Revisited: The New Production of Knowledge. *Minerva*, 41, pp.179–194.
- O’Callaghan, C. (2009) *Sounds: A philosophical theory*. Oxford, Oxford University Press.
- Odland, B. & Auinger, S. (2009) Reflections on the Sonic Commons. *Leonardo Music Journal*, 19, pp.63–68.
- Oliveros, P. (2005) *Deep Listening: A Composer’s Sound Practice*. New York, IUniverse.
- Olmedo, M.A. (2012) An Elucidation of Public Sound Art Through a Non-Sonorous Tradition. ... -*An Interdisciplinary Journal of Sound and Sound ...*, 2 (1). Available from: <<http://www.soundeffects.dk/article/view/5253>>.
- Ouzounian, G. (2014) Acoustic Mapping: Notes from the Interface. In: M. Gandy & B. Nelson eds. *The Acoustic City*. Berlin, JOVIS Verlag, pp.164–173.
- Ouzounian, G. (2013a) Recent Sound Art in Belfast. *Leonardo Music Journal*, 23, pp.47–54.
- Ouzounian, G. (2013b) Sound installation art: from spatial poetics to politics, aesthetics to ethics. In: G. Born ed. *Music, Sound and Space Transformations of Public and Private Experience*. Cambridge University Press, pp.73–89.

- Ouzounian, G. & Lappin, S.A. (2014) Soundspace: A Manifesto. *Architecture and Culture*, 2 (3), pp.305–316. Available from:
<<https://www.tandfonline.com/doi/full/10.2752/205078214X14107818390559>>.
- Patch, J. (2009) THE ART OF NOISE : Hearing, Feeling and Experiencing the Sound of Democracy. *Soundings : An Interdisciplinary Journal*, 92 (3), pp.303–329.
Available from:
<<https://www.jstor.org/stable/pdf/41179250.pdf?refreqid=excelsior%3A383158a0f34bc1658aa04fddcd8721e0>>.
- Pinch, T. (2004) Sound Studies: New Technologies and Music. *Social Studies of Science*, 34 (5), pp.635–648. Available from:
<<http://sss.sagepub.com/cgi/doi/10.1177/0306312704047615>> [Accessed 5 December 2014].
- Pinch, T. & Bijsterveld, K. (2012) *New Keys to the World of Sound*.
- Pinder, D. (2001) Ghostly Footsteps : Voices , Memories and Walks in the City. , 8 (1), pp.1–19.
- Pisano, L. (2017) Terrae Incognitae – Crossing the Borders of Sonic Ecology. In: *Invisible Places*. pp.469–477.
- Polli, A. (2012) Soundscape, sonification, and sound activism. *AI and Society*, 27 (2), pp.257–268.
- Porcello, T. (2007) Three contributions to the ‘Sonic Turn’. *Current Musicology*, 83 (83), pp.153-166,190.
- Powell, E. (2008) sound. garden. scape: Gastown, a Virtual Soundwalk. Simon Fraser University.
- Presner, T. S., Shepard, D., & Kawano, Y. (2014) *Hypercities: Thick Mapping in the Digital Humanities*. Cambridge, Massachusetts, Harvard University Press.
- Protevi, J. (2011) Ontology, Biology, and History of Affect. In: L. Bryant, N. Srnicek, & G. Harman eds. *The speculative turn: Continental materialism and realism*. re.

press, pp.393–405.

Proyer, R.T. (2013) The well-being of playful adults : Adult playfulness , subjective well-being , physical well-being , and the pursuit of enjoyable activities. *The European Journal of Humour Research*, 1 (1), pp.84–98. Available from: <<http://europeanjournalofhumour.org/index.php/ejhr/article/view/ReneProyer/ReneProyer>>.

Psarras, B. (2013) Hybrid walking as art: Approaches and art practices on revealing the emotional geographies of Tube stations. In: *2nd Hybrid City 'Subtle Revolutions' International Conference*.

Radicchi, A. (2009) Firenze Sound Map [Internet]. Available from: <<http://www.firenzesoundmap.org/>> [Accessed 3 December 2018].

Rancière, J. (2010) *Dissensus: On politics and aesthetics*. S. Corcoran ed. London & New York, Continuum.

Rancière, J. (1994) *The Names of History: On the Poetics of Knowledge*. [French or. trans. Hassan Melehy with a foreword by Hayden White ed. Minneapolis, University of Minnesota Press.

Rawes, I.M. (2009) London Sound Survey [Internet]. Available from: <<https://www.soundsurvey.org.uk/>> [Accessed 3 December 2018].

Revill, G. (2016) How is space made in sound? Spatial mediation, critical phenomenology and the political agency of sound. *Progress in Human Geography*, 40 (2), pp.240–256. Available from: <<http://phg.sagepub.com/cgi/doi/10.1177/0309132515572271>>.

Richardson, M. (1982) Being-in-the-Market versus Being-in-the-Plaza : Material Culture and the Construction of Social Reality in Spanish America. *American Ethnologist*, 9 (2), pp.421–436.

Ritzer, G. & Jurgenson, N. (2010) Production, Consumption, Prosumption: The nature of capitalism in the age of the digital 'prosumer'. *Journal of Consumer Culture*, 10 (1), pp.13–36. Available from: <<http://joc.sagepub.com/cgi/doi/10.1177/1469540509354673>> [Accessed 17

July 2014].

- Rueb, T. (2002) Sonic space-time: Sound installation and secondary orality. Consciousness reframed.
- Russolo, L. (1913) *The Art of Noise*.
- Sadler, S. (1998) *The situationist city*. Cambridge, Massachusetts, MIT Press.
- Saukko, P. (2003) *Doing Research in Cultural Studies: An Introduction to Classical and New Methodological Approaches*. London; Thousand Oaks; New Delhi, SAGE.
- Schaefer, M., Heinze, H.J., Rotte, M. & Denke, C. (2013) Communicative versus Strategic Rationality: Habermas Theory of Communicative Action and the Social Brain. *PLoS ONE*, 8 (5), pp.1–7.
- Schafer, M.R. (2007) Acoustic Space. *Circuit: musiques con- temporaines*, 17 (3), pp.83–86.
- Schafer, M.R. (1977) *The Soundscape: Our Sonic Environment and the Tuning of the World*. Rochester, Vermont, Destiny Books.
- Schafer, M.R. (1976) *Creative music education: A handbook for the modern music teacher*. New York, Schirmer Books.
- Schafer, M.R. (1969) *Ear Cleaning: Notes for an Experimental Music Course*. New York, Associated Music Publishers.
- Schneider, A. & Wright, C. (2010) *Between Art and Anthropology. Contemporary Ethnographic Practice*. A. Schneider & C. Wright eds. New York, USA, Berg.
- Schulze, H. (2018) *The sonic persona: An anthropology of sound*. New York & London, Bloomsbury.
- Sémidor, C. (2006) Listening to a city with the soundwalk method. *Acta Acustica united with Acustica*, 92 (6), pp.959–964.
- Sennett, R. (2017) *The Fall of Public Man*. Cambridge, WW Norton & Company.
- Sennett, R. (2012) *Together : The Rituals, Pleasures and Politics of Co-Operation*. Yale,

Yale University Press.

Sennett, R. (1974) *The Fall of Public Man*. Cambridge, Cambridge University Press.

Sheets-Johnstone, M. (1999) *The primacy of movement*.

Sheller, M. (2014) The new mobilities paradigm for a live sociology. *Current Sociology*, 62 (6), pp.789–811.

Sheller, M. (2011) Mobility. *Sociopedia.isa*, pp.1–12.

Sheller, M. (2004) Automotive Emotions: Feeling the Car. *Theory, Culture & Society*, 21 (5), pp.221–242.

Sheller, M. & Urry, J. (2006b) The new mobilities paradigm. *Environment and Planning*, 38 (2), pp.207 – 226.

Sheller, Mimi & Urry, Jason (2006a) *Mobile Technologies of the City*. M. Sheller & J. Urry eds. London and New York, Routledge.

Signorelli, V. (2014) Unfolding the Soundmaps . Suggestions for Representing and Sharing The Sensory Form of Urban Spaces Through Virtual Environments and Web-Mapping Technologies. In: *Invisible Places – sounding cities: Sound, Urbanism and Sense of Place*. Viseu, Portugal.

Silverstone, R. & Sujon, Z. (2005) *Urban Tapestries: Experimental Ethnography , Technological Identities and Place*.

Soja, E. (1996) *Thirdspace: Journeys to Los Angeles and other real-and-imagined places*. Cambridge, Mass. ; Oxford, Blackwell.

De Solà-Morales, I. (2013) Terrain vague*. In: *Terrain Vague: Interstices at the Edge of the Pale*. Taylor and Francis, pp.24–30.

Solnit, R. (2002) *Wanderlust: a history of walking*. London; New York, Verso.

Sounday Suoni di Bologna [Internet]. Available from:

<<http://www.soundsofeurope.eu/organisation/suoni-di-bologna-sunday/>>
[Accessed 3 December 2018].

- de Souza e Silva, A. (2006) From Cyber to Hybrid: Mobile Technologies as Interfaces of Hybrid Spaces. *Space and Culture*, 9 (3), pp.261–278. Available from: <<http://sac.sagepub.com/cgi/doi/10.1177/1206331206289022>> [Accessed 19 November 2014].
- de Souza e Silva, A. & Hjorth, L. (2009) Playful Urban Spaces. *Simulation & Gaming*, 40 (5), pp.602–625.
- de Souza e Silva, A. & Sutko, D.M. (Eds). (2009) *Digital Cityscapes: Merging Digital and Urban Playspaces*. New York, Peter Lang.
- Spinney, J. (2011) A chance to catch a breath: using mobile video ethnography in cycling research. *Mobilities*, 6 (2), pp.161–182.
- Stalkerlab (2008) ROME TO ROMA_ diario nomade [Internet]. Available from: <<http://tv.architettiroma.it/notizie/10396.aspx>> [Accessed 1 December 2018].
- Stanza (2000) Soundcities [Internet]. Available from: <<http://www.soundcities.com>> [Accessed 3 December 2018].
- Stavrides, S. (2016) *Common Space: The city as commons*. M. De Angelis ed. Zed Books Ltd.
- Stavrides, S. (2013) Re-inventing spaces of commoning: Occupied Squares in movement. *Quaderns de l'Institut Catala d'Antropologia*, 18 (2), pp.40–52.
- Stavrides, S. (2012) Squares in Movement. *South Atlantic Quarterly*, 111 (3), pp.585–596. Available from: <<https://read.dukeupress.edu/south-atlantic-quarterly/article/111/3/585-596/3609>>.
- Stavrides, S. (2011) *Towards The City of Thresholds*.
- Stavrides, S. & De Angelis, M. (2016) *Common Space: The city as commons*. M. De Angelis ed. Zed Books Ltd.
- Stein, M. & Stein, J. (2008) Montreal Sound Map [Internet]. Available from: <<http://www.montrealsoundmap.com/?lang=en>> [Accessed 3 December 2018].

- Stern, N. (2013) *Interactive art and embodiment: The implicit body as performance*. Gylphi Limited.
- Sterne, J. (2013) Soundscape, Landscape, Escape. In: K. Bijsterveld ed. *Soundscapes of the Urban Past: Staged Sound as Mediated Cultural Heritage [transcript]*. Verlag, pp.181–194.
- Sterne, J. (2003) *The Audible Past: Cultural Origins of Sound Reproduction*. Durham & London, Duke University Press. Available from: <http://muse.jhu.edu/content/crossref/journals/technology_and_culture/v045/45.2bijsterveld.html>.
- Stoetzler, M. & Yuval-Davis, N. (2002) Standpoint theory, situated knowledge and the situated imagination. *Feminist Theory*, 3 (3), pp.315–333.
- Strathern, M. (2005) *Partial Connections*. 2nd ed. Lanham, MD, AltaMira Press.
- SubRosa (2011) Bodies unlimited: A decade of subRosa's art practice. *N.Paradoxa*, 28, pp.16–25. Available from: <http://www.ktpress.co.uk/pdf/vol28_npara_16-25_subRosa.pdf2Fpdf%252Fvol28_npara_16-25_subRosa.pdf&ei=k6osUKGcFsHk4QSD8IGoDg&usg=AFQjCNG2kgeYpn31tNWxUUVAMSH9BcMI5w>.
- SubRosa (2001) Becoming Autonomous Zones (BAZ). Available from: <<http://cyberfeminism.net/baz-poster/>>.
- Sutko, D.M. & de Souza e Silva, A. (2011) Location-aware mobile media and urban sociability. *New Media & Society*, 13 (5), pp.807–823. Available from: <<http://nms.sagepub.com/cgi/doi/10.1177/1461444810385202>> [Accessed 22 November 2014].
- Talianni, K. (2017) Invisible Cities: Mapping the Invisible. [Internet]. Available from: <<https://dmisp.digital.eca.ed.ac.uk/blog/invisiblecities2017/>> [Accessed 3 December 2018].
- Talianni, K. (2016) Data Flâneurs [Internet]. Available from: <<https://dmisp.digital.eca.ed.ac.uk/blog/dataflaneurs2016/>> [Accessed 3 December 2018].

- Talianni, K. & Charitos, D. (2013) 'Soundwalk': An embodied auditory experience in the urban environment. In: *Intelligent Environments (Workshops)*. Athens, Greece, pp.684–692.
- Tara de Freitas, R. (2014) BirdWatching [Internet]. Available from: <<http://www.rowantaradefreitas.com/bird-watching/>> [Accessed 1 December 2018].
- Taylor, R.S. (2017) Soundful Cities. Sonic Performativity, Play and Ephemeral Micro-Communities. Utrecht University.
- The British Library (2010) UK Soundmap [Internet]. Available from: <<https://sounds.bl.uk/Sound-Maps/UK-Soundmap>> [Accessed 3 December 2018].
- Thibaud, J.-P. (2015) The backstage of urban ambiances: When atmospheres pervade everyday experience. *Emotion, Space and Society*, 15, pp.39–46. Available from: <<http://dx.doi.org/10.1016/j.emospa.2014.07.001>>.
- Thibaud, J.-P. (2013) Commented City Walks. *Journal of Mobile Media*, 7 (1). Available from: <<http://wi.mobilities.ca/commented-city-walks/>>.
- Thibaud, J.-P. (2003) The sonic composition of the city. In: M. Bull & L. Back eds. *The Auditory Culture Reader*. Amsterdam, Berg, pp.329–341.
- Thielmann, T. (2010) Locative Media and Mediated Localities: An Introduction to Media Geography. *Aether. the Journal of Media Geography*, 5a (March), pp.1–17.
- Thompson, M. (2017a) *Beyond Unwanted Sound. Noise, Affect and Aesthetic Moralism*. Bloomsbury Academic.
- Thompson, M. (2017b) Whiteness and the Ontological Turn in Sound Studies. *Parallax*, 23 (3), pp.266–282. Available from: <<http://doi.org/10.1080/13534645.2017.1339967>>.
- Thompson, M. (2016) Feminised Noise and the 'Dotted Line' of Sonic Experimentalism. *Contemporary Music Review*, 35 (1), pp.85–101.
- Thompson, M. (2012) Productive Parasites: Thinking of Noise as Affect. *Cultural*

- Studies Review*, 18 (3), pp.13–35.
- Thrift, N. (2008) *Non-representational theory: Space, politics, affect*. Routledge.
- Thulin, S. (2017) Situated Composition in Emerging Mobile Sound Production Technologies and Practices. *Organised Sound*, 22 (1), pp.73–82.
- Thulin, S. (2016) Sound maps matter: expanding cartophony. *Social & Cultural Geography*, 9365 (March), pp.1–19. Available from:
<<https://www.tandfonline.com/doi/full/10.1080/14649365.2016.1266028>>.
- Thulin, S. (2014) *Composing Places: Practices and Potentials of Sound Mapping and Locative Audio*. Concordia University Montreal, Québec, Canada.
- Timeto, F. (2015) *Diffractional Technospaces: A Feminist Approach to the Mediations of Space and Representation*. Ashgate Publishing, Ltd.
- Titon, J.T. (1997) Knowing Fieldwork. In: G. Barz & T. Cooley eds. *Shadows in the Field: New Perspectives for Fieldwork in Ethnomusicology*. New York, Oxford University Press, pp.87–100.
- Tixier, N. (2002) Street listening. A Characterisation of the Sound Environment - the qualified listening in motion method. *Soundscape Studies and Methods*, (2002), pp.83–91.
- Toffler, A. (1981) *The third wave*. New York, USA, Bantam Books.
- Travlou, P. (2014) Ethnographies of Co-Creation and Collaboration As Models of Creativity. *Elmcip*, pp.245–304. Available from:
<http://elmcip.net/sites/default/files/files/attachments/criticalwriting/rettberg_baldwin_elmcip.pdf#page=257%5Cnevernote:///view/11451790/s107/427bcc94-7a2b-4016-b893-5c76a34faf1b/427bcc94-7a2b-4016-b893-5c76a34faf1b/>.
- Truax, B. (1999) *Handbook for Acoustic Ecology*. Burnaby, British Columbia, Cambridge Street Publishing. Available from:
<[http://www.sfu.ca/~westerka/installations/Nada/Nada sound walk/soundwalkis.html](http://www.sfu.ca/~westerka/installations/Nada/Nada%20soundwalk/soundwalkis.html)>.

- Truax, B. (1984) *Acoustic Communication*. Ablex Publishing Corporation. Available from: <<http://www.amazon.com/Acoustic-Communication-Springer-Handbook-Auditory/dp/1441931481>>.
- Tschirhart, P.L. (2013) Sound Maps and the Representation of Audible Space.
- Tuters, M. (2004) The Locative Commons : Situating Location-Based Media in Urban Public Space. *Electronic Proceedings of the 2004 Futuresonic Conference*.
- Ultra-red (2015) Notes on the Protocols for a Listening Session (Glasgow Variation). In: A. Carlyle & C. Lane eds. *On listening*. Devon, Uniformbooks, pp.30–33.
- University of Aberdeen Aberdeen Soundsites [Internet]. Available from: <<http://aberdeensoundsites.net/soundsites/login.php>> [Accessed 3 December 2018].
- Varnelis, K. & Friedberg, A. (2008) Place: The networking of public space. In: *Networked publics*. Cambridge, Massachusetts, MIT University Press, pp.15–42.
- Varnelis, K. & Friedberg, A. (2006) *Place: Networked place. Networked Publics*. Cambridge, MA, MIT Press.
- Vasagar, J. (2012) Public spaces in Britain's cities fall into private hands [Internet]. Available from: <<https://www.theguardian.com/uk/2012/jun/11/granary-square-privately-owned-public-space>> [Accessed 3 December 2018].
- Venot, F. & Sémidor, C. (2006) The 'soundwalk' as an operational component for urban design'. *Proceedings of the 23rd Conference on Passive and ...*, (September). Available from: <http://www.unige.ch/cuepe/html/plea2006/Vol2/PLEA2006_PAPER867.pdf>.
- Voegelin, S. (2019) *The Political Possibility of Sound*. New York & London, Bloomsberry Academic.
- Voegelin, S. (2014) The landscape as sonic possible world. In: *Sonic possible worlds: hearing the continuum of sound*. New York, USA, Blackwell Publishers, pp.8–47.
- Voegelin, S. (2010) *Listening to Noise and Silence. Towards a Philosophy of Sound Art*.

New York; London, Continuum.

Voegelin, S. (2006) Sonic memory material as 'pathetic trigger'. *Organised Sound*, 11 (1), pp.13–18.

Wagner, H.R. (1983) Toward an anthropology of the life-world: Alfred Schutz's quest for the ontological justification of the phenomenological undertaking. *Human Studies*, 6 (1), pp.239–246.

Waldock, J. (2011) Soundmapping: Critiques and Reflections on this New Publicly Engaging Medium. *Journal of Sonic Studies*, 1 (1). Available from: <<https://www.researchcatalogue.net/view/214583/214584>>.

Watson, C. (2013) Inside the Circle of Fire: A Sheffield Sound Map [Internet]. Available from: <<https://chriswatson.net/2013/08/05/inside-the-circle-of-fire-a-sheffield-sound-map/>> [Accessed 3 December 2018].

Westerkamp, H. (1996) Kits Beach Soundwalk (1989). *Transformations. Empreintes Digitales. IMED* 9631.

Westerkamp, H. (1974) Soundwalking. *Sound Heritage*, 3 (4), pp.18–27.

Wilken, R. (2012) Locative media: From specialized preoccupation to mainstream fascination. *Convergence: The International Journal of Research into New Media Technologies*, 18 (3), pp.243–247.

Wolff, J. (1985) The invisible flâneuse. Women and the literature of modernity. *Theory, Culture & Society*, 2 (3), pp.37–46.

Young, I.M. (1990) *Justice and the Politics of Difference*. Princeton, New Jersey, Princeton University Press.